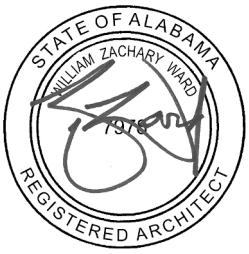
WARD SCOTT MORRIS
ARCHITECTURE



ADDENDUM NO. 2:

Date:	September 4, 2026
Project:	Douglas High School Competition Gymnasium Addition and Renovation DCM# 2023777
Owner:	Marshall County School District
Architect:	Ward Scott Morris Architecture, Inc.
BID DATE:	**September 22, 2026**
BID TIME:	2:00 PM CST (local time) PHYSICAL BID LOCATION: Board Room at the Marshall County Board of Education, 12380 U.S. HWY 431 S. Guntersville, Alabama 35976.

This Addendum forms a part of the Contract Documents and modifies the original Bid Documents as noted below. Acknowledge receipt of this Addendum in the location provided on the Bid Proposal Form. Further instruction, including requested approved equals to follow in subsequent addenda.

1.1 GENERAL

1.2 BIDDER QUESTIONS

A. See Attached Document

1.3 DRAWINGS

A. 1-A331 – Section Details
   1. EIFS profiles adjusted to decrease foam depth.

1.4 SPECIFICATIONS

A. 05b-UNIT PRICES FORM
   1. Linear Foot in Place corrected to Tons in Place on Unit Price #5.
B. SECTION 01100 – SUMMARY
   1. Construction duration has been changed to 520 calendar days.
C. SECTION 012100 – ALLOWANCES
   1. Allowances have been renumbered to correct issues with numerical order.
D. SECTION 012300 – ALTERNATES
   1. Alternate No 1 has been changed.
   2. Alternate No 2 has been added.
E. SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION
   1. Language referencing “Construction Manager” corrected to reference “General Contractor.”

1.5 MFG & PRODUCT APPROVALS

A. Section 12600 – Telescopic Seating
   1. Sheridan is an approved manufacturer
B. Section 116623 – Gymnasium Equipment
   1. Aalco Manufacturing is an approved manufacturer.
C. Section 116653 – Gymnasium Divider Curtain
   1. Aalco Manufacturing is an approved manufacturer.
D. Section 133419 – Metal Building Systems
   1. Red Dot Buildings is an approved manufacturer.
   2. Prosteel Buildings is an approved manufacturer.

1.6 ATTACHED TO ADDENDUM

A. Pre-Bid Agenda
B. Pre-Bid Sign-In Sheet
C. Unit Prices Form
D. Bidder Questions Document
E. Pinnacle RFI Response
F. Geotechnical Report
G. Specifications
   1. Additions to Supplemental General Conditions of the Contract
   2. SECTION 011000 - SUMMARY
   3. SECTION 012100 – ALLOWANCES
   4. SECTION 012300 – ALTERNATES
   5. SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION
H. Architectural Sheets
   1. 1-A331 – Section Details

END OF ADDENDUM

DHS Competition Gym: Pre-Bid Conference Check List

1.1 GENERAL

A. Welcome
B. Pre-bid conference is non-mandatory: Sign-in Sheet (will be included in the next addendum)
C. Name and location of the project: DHS Competition Gym, 151 Eagle Point Drive, Horton Alabama
D. Introduce the Owner, Architect, CM and affiliation of key personnel
   1. Owner Representative – Mark Howard
   2. Scout Program Management – Dennis McDaniels
   3. Project Architect/Manager – Chad Terwilliger, Ward Scott Morris
   4. Project Manager – JP Alexander, Ward Scott Morris
E. Project funding
   1. Local Funding, No PSCA funds

1.2 SUMMARY

A. Overall summary – New competition gymnasium adjacent to the existing high school. A multi-purpose gymnasium is included in the project as an alternate.
   1. Construction Type II-B: Masonry, light gauge framing, and metal building walls. The competition and multipurpose gym will use a rigid frame PEMB structure. Exterior finishes are brick veneer and metal wall panels. Roofing is a mixture of PVC and standing seam metal roof panels.
B. Addenda
   1. Addendum 1 was issued yesterday.
   2. Addendum 2 will be issued in the coming days.
C. Organization of contract documents – Hard copy plans are available for a deposit of $XX per set ordered from www.ward-scottplans.com. Electronic Copies of Plans and Specifications are available from the same website free of charge. Initial registration is required but no cost is associated.
D. Site visit is recommended (coordinate visits through architect)

1.3 RECEIPT OF BIDS

A. Date: September 22nd 2026
B. Time: 2PM
C. Place: Marshall County Board of Education, 12380 US-431, Guntersville, AL
D. Proposal form – Must use the Proposal form provided by original contract documents or by subsequent addenda.
E. Accounting of Sales Tax, Attachment to DCM Form C-3A: Shall be included in bid proposal envelopes.
F. Bid Bond; All bids must have a bid bond of 5% of the bid amount, not to exceed $10,000.00, or a certified check. This must be included with the proposal form when you submit your bid.
G. Copy of Alabama State Contractor's License: Shall be included in bid proposal envelopes.
H. Proposal envelopes must have the bidder's company name and address, said company's State of Alabama General Contractor license number, the name of the project, the name and number of the package the contractor is submitting a proposal for, and the owner's name clearly marked on the outside of the envelope.

1.4 CONTRACTUAL REQUIREMENTS

A. Performance & Payment Bonds will be required for the successful bidder in order to enter into a contract.
B. This is a tax-exempt project, and all bidders WILL NOT include taxes in their bid. Refer to specification sections 012910 Sales and Use Tax Savings, and Form ST: EXC-01 Sales and Use Tax Certificate of Exemption for Government Entity Project (including the Instructions for Preparation) documents provided in the specifications for proper procedures.
C. Required permits and licenses – The contractor will be responsible for obtaining a Building Permit from all Authorities having Jurisdiction. All trade contractors are required to have current business licenses as required. Please note that the contractor will be responsible for including in their lump sum and paying the DCM State Permit fees noted within the specifications.
D. Builder's Risk Insurance will be provided by the Contractor.
E. Project schedule:
   1. Contract Award: October 14th 2026(Tentative)
   2. Preconstruction Meeting: October 28th 2026 (Tentative)
   3. Construction Overall Timeframe: ~~600 Calendar Days from Preconstruction Meeting~~

a. The successful bidder will be required to execute their contracts and bonds and submit them to the Architect along with a valid Certificate of Insurance within seven (7) calendar days after receiving a Notice of Award.

4. Anticipated Substantial Completion: June 20th 2028(Tentative)

F. Liquidated damages. Amount: $500.00/Calendar Day

G. Alternates
   1. Multi-Purpose Gymnasium

H. Allowances
   1. Base Bid
      a. 1 (Unit Price): Removal and Replacement of Unsuitable/Unconsolidated Materials – 3500 cu. Yd.
      b. 2 (Unit Price): Removal and Replacement of Rock – 2750 cu. Yd.
      c. 3 (Unit Price): Concrete Foundations – 70 cu. Yd.
      d. 4 (Unit Price): Reinforcing Steel – 2 tons
      e. 5 (Unit Price): Structural Steel - .5 ton
      f. 6: Landscaping
      g. 7: Permit and Utility Fees
      h. 8: Project Contingency
      i. 9: Fire Fighter Communication System
      j. 10: AV Allowance
      k. 11: Exterior Building Signage
      l. 12: Brick Allowance
      m. 13: Interior Graphics
   2. Alternates
      a. A-1: Project Contingency
      b. A-2 (Unit Price): Removal and Replacement of Unsuitable/Unconsolidated Materials – 3000 cu. Yd.
      c. A-3 (Unit Price): Removal and Replacement of Rock – 1750 cu. Yd.
      d. A-4 (Unit Price): Concrete Foundations – 40 cu. Yd.
      e. A-5 (Unit Price): Reinforcing Steel – 2 tons
      f. A-6 (Unit Price): Structural Steel - .5 ton
      g. A-7: AV Allowance
      h. A-8: Fire Fighter Communication System
      i.

I. Unit Prices
   1. Removal and Replacement of Unsuitable/Unconsolidated Materials
   2. Removal and Replacement of Rock
   3. Concrete foundations
   4. Reinforcing Steel
   5. Structural Steel

1.5 SITE CONDITIONS

A. Discuss access for construction operations.

B. Construction limits – Construction Limits to be coordinated with Owner during construction.

C. Parking –Contractors and their subcontractors will be permitted to park on site in the existing parking areas as coordinated with the Owner.

D. On-site communications – is required for superintendent on site. Superintendent ***MUST BE ON SITE*** while construction is occurring.

E. Security at site –Contractors will be responsible for securing their own materials, tools, and equipment.

F. Temporary Facilities – Utilities in existing building are available for construction operations. ***Coordinate all shutdowns with owner at least 48 hours ahead of time.*** Contractor shall be responsible for removal of any construction debris not expressly noted to be performed outside the contract.

G. Job Safety and Cleanup
   1. Contractor shall be responsible for maintaining all safety measures during project. Owner and architect are not responsible.

      Contractor will be responsible for picking up construction waste and debris as necessary and depositing it into the appropriate containers.

1.6 MISCELLANEOUS

A. Project comments from Owner

1. No alcohol or tobacco products while on site. No contact with teachers or students while on site.

1.7 QUESTIONS FROM BIDDERS

A. Please submit all questions in the form of email so that we are able to better track them.
   1. Primary: chad@wardscottmorris.com
   2. CC: jp@wardscottmorris.com

WARD SCOTT MORRIS
ARCHITECTURE

802 Shoney Drive SW, Suite E
Huntsville, Alabama 35801
T 205.536.6670
F 205.536.6696

SIGN-IN SHEET – DHS Competition Gym

DATE: 09/01/2026 TIME: 10:00 AM LOCATION: Marshall County BOE 12380 US-431, Guntersville, AL	PROJECT: WSM # 23-091 DCM No.: 23-091

Name:	Company:	Phone:	Email:
☐ Nathan Smith	Vantage Construction	256-679-6797	NSmith@vcc-con.com
☐ Jack Fowler	CCC	256 534 2356	bid1@consolidatedconstruction.com
☐ Travis Smith	CBA	205-955-4504	SmithTE@cba-projectmgt.com
☐ Preston Holcomb	Harrison Contractors	(256) 605-0876	preston@harrison-contractors.com
☐ Sean Smith	Corman Construction	256-891-3777	estimating@cormanconstruction.com
☐ Nick Miele	WYATT BUILDS	205 305 3990	estimating@wyattbuilds.com
☐ PAUL KILLEBREW	MATTHES PARKER	904-614-8724	estimating@matthesparker.com
☐ Coby Lowman	P&C construction	423-668-6071	Clowman@pc-const.com
☐ ZACH RICHEY	LAMBERT CONTRACTING	2565946650	projects@lambert-contracting.com
☐ Melissa McFarland	ENGAV	205-618-8324	sales@engav.com
☐ Shea Thomas	Lee Builders	256-651-8131	Estimating@Leebuilders.com
☐ Matt Plemmons	Caliber Construction	770-550-6854	Mplemmons@caliberIconstruction.com
☐ DENNIS MCDANIEL	SCOUTPM	205 4208163	DMCDANIEL@SCOUTPM.COM
☐ JP ALEXANDER	WSM	256 740 1835	jpalexander@wardscottmorris.com
☐			
☐			

UNIT PRICES [ADD 2]

Attachment to DCM Form C-3: Unit Prices

1.1 SCHEDULE OF UNIT PRICES BASE BID

A. Unit Price No. 1: Unsuitable Soils
   1. Undercutting unsuitable soils, disposing of material off site, and replacing with embankment fill or other material as approved by the Owner's geotechnical representative.

      Unit Price per Cubic Yard in Place $_____

B. Unit Price No. 2 Excavation and Replacement of Rock
   1. Undercutting unsuitable soils, disposing of material off site, and replacing with embankment fill or other material as approved by the Owner's geotechnical representative.

      Unit Price per Cubic Yard in Place $_____

C. Unit Price No. 3: Concrete Foundations
   1. Concrete foundation in place and installed as directed by the Owner, Architect, Engineer or the Construction Manager.

      Unit Price per Ton in Place $_____

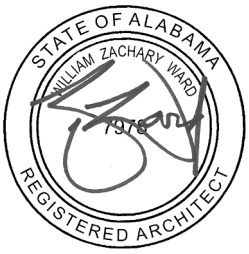
D. Unit Price No. 4: Reinforcing Steel
   1. Reinforcing steel in place and installed as directed by the Owner, Architect, Engineer or the Construction Manager.

      Unit Price per Ton in Place $_____

E. Unit Price No. 5: Structural Steel
   1. Structural steel in place and installed as directed by the Owner, Architect, Engineer or the Construction Manager.

      [ADD 2] Unit Price per Ton. in Place $_____

WARD SCOTT MORRIS
ARCHITECTURE



BIDDER QUESTIONS Addendum 2:

A. From EIFS Subcontractor: I wanted to double check the size of the EIFS required for this job. The plans show an 8" gap needed to be filled with foam. That would increase the price dramatically. If it could be framed differently, it would be more cost effective.
   1. The detail has been updated to show light gauge framing that reduces the depth of the foam profile piece.

B. Is the multipurpose gym intended to be a DEDUCT? If the multipurpose gym is intended to be an ADD will a new proposal form be provided?
   1. Section 012300 has been revised to include the alternate competition gym parking and multipurpose gym as ADD Alternates.

C. Can a Geotech report be provided?
   1. The Geotech report has been attached to this addendum.

D. What is the intention for the project schedule?
   1. Gyms are to be constructed concurrently.

E. Instructions to Bidders, Item 10 b requires general contractors to submit a list of proposed major subcontractors and suppliers within 24 hours of bid. Is this a requirement for all General Contractors submitting bids, or just the low two General Contractors? Do you have a specific form you want General Contractors to use for this submittal?
   1. This is a DCM requirement for all General Contractors. There is no specific form on which to provide this information.

F. Attachment to DCM Form C-3: Unit Prices: Item 1.1 E: Unit Price No. 5 Structural Steel unit should be tons in place, not L.F. in place to match the units for this unit price in section 012000, Part 3.1 E.
   1. This form has been amended.

G. Specification Section 012100-Allowances, Part 3.4 has the following discrepancies (I believe the Allowances are not numbered correctly): Part 3.4 C is allowance No. A-3, and then skips to Part 3.4 D which is Allowance No. A-5. Part 3.4 F is labeled Allowance No. A-4; certainly out of numerical sequence. Part 3.4 I is labled Allowance No. 12. I believe this Allowance should be Allowance A-9 to stay in numerical sequence with the other Allowances for Volume 2 (Alternate) Multi-Purpose Gym.
   1. Allowance numbers have been corrected.

H. Plumbing: Please provide a specification for SK-3 Sink and SK-4 Sink.
   1. Please see attached response from Pinnacle Engineering.

I. Plumbing: SH-1 and SH-2 are no longer available and there are no equals listed in the specifications. Please advise.
   1. Please see attached response from Pinnacle Engineering.

Response to RFI

Date	9/3/26
Project	Douglas High School Competition Gym
Project No.	24005

Attention	Ward Scott Morris
From	Pinnacle Engineering

Copies to
F:\Projects\24\24005 - Douglas High School Gymnasium\Documents\RFIs\26-9-3 - pei-RFI response.doc

Response

Question/Comment #: Plumbing: Please provide a specification for SK-3 Sink and SK-4 Sink.

Pinnacle Response:

SK-3: STAINLESS STEEL SINK (DOUBLE DEEP COMPARTMENT):
1. Elkay DLR-3322-10 single deep compartment self-rimming, 18 gauge 304 stainless steel sink, satin finish, fully undercoated, three faucet holes on 4" centers, 10" deep bowl.
2. Zurn Z-871C4 polished chrome-plated 8" brass deck faucet with 8" centerline rigid or swing gooseneck spout and quarter turn ceramic disc cartridge. 2.0 gpm variable orifice aerator. 4" vandal-resistant brass wrist blade color-coded handles, ADA designed.
3. Elkay LK-99 heavy gauge stainless steel body. Conical stainless steel strainer plate with movable lift up knob with neoprene stopper. Chrome-plate 1-1/2" tailpiece.
4. McGuire 8912 1-1/2" x 1-1/2", 17 gauge brass p-trap with tubular wall bend.
5. McGuire 171 1/2" x 1/2" chrome-plated supplies with stops.

SK-4: STAINLESS STEEL SINK (SINGLE DEEP COMPARTMENT):
1. Elkay DLR-2222-10 single deep compartment self-rimming, 18 gauge 302 stainless steel sink, satin finish, fully undercoated, three faucet holes on 4" centers, 10" deep bowl.
2. Zurn Z-871C4 polished chrome-plated 8" brass deck faucet with 8" centerline rigid or swing gooseneck spout and quarter turn ceramic disc cartridge. 2.0 gpm variable orifice aerator. 4" vandal-resistant brass wrist blade color-coded handles, ADA designed.
3. Elkay LK-99 heavy gauge stainless steel body. Conical stainless steel strainer plate with movable lift up knob with neoprene stopper. Chrome-plate 1-1/2" tailpiece.
4. McGuire 8912 1-1/2" x 1-1/2", 17 gauge brass p-trap with tubular wall bend.
5. McGuire 171 1/2" x 1/2" chrome-plated supplies with stops.

Question/Comment #: Plumbing: SH-1 and SH-2 are no longer available and there are no equals listed in the specifications. Please advise.

Pinnacle Response:

SH-1: SHOWER (ADA COMPLIANT):
1. Comfort Designs SSS 6239 BF .75, left or right, solid surface white finish, outside dimensions 62” X 36 ¼” X 77 ¾”. Unit shall meet ANSI Z124.1.2, ADA and ICC/ANSI A117.1.
2. Unit to have 1- 48 X 1 ¼” horizontal grab bar on back wall and two (2) 28” X 1 ¼” on each side wall
3. Furnish Willoughby WBIS-FA-TPV-2.5-FX-GB24-GBHM thermostatic / pressure balanced shower valve with handheld shower head, hose, supply ell and vacuum braker. Provide GB24 grab / slide bar with holder on end wall.
4. Shower and valve to be ADA compliant.

SH-2: SHOWER (ADA COMPLIANT):
1. Comfort Designs model SSS6233BF-F .75 L-Bar solid surface white roll-in shower 62” X 32.75” X 78.5” outside dimension. Unit to meet ICC/ANSI 117.1, ANSI 124.2 ADAAG..
2. Unit to have one (1) 36” X 1 ¼” grab bar on back wall and one (1) 22” X 1 ¼” grab bar on end wall. 26” X 21” white padded fold up seat.
3. Slip resistant surface on floor.
4. Stainless steel curtain rod with cup holders.
5. Zurn Z7300-SSC-HW15-MT-VB pressure balanced shower valve with service stops, 60” stainless steel hose with handheld shower head, 24” grab / slide bar with holder, in line vacuum breaker and supply elbow mounted to meet ADA requirements on back wall of shower unit.

GEOTECHNICAL REPORT

Douglas Campus -
High School and New Gymnasium

Douglas, Marshall County, Alabama

Prepared for:

Marshall County Schools
Guntersville, Alabama

Prepared by:

TTL, Inc.
Huntsville, Alabama

Project No. 000230503466.00

March 22, 2024

101 Quality Cir. NW, Ste.130
Huntsville, AL 35806
256.384.6768
www.TTLUSA.com

March 22, 2024

Marshall County Schools
Attn: Dr. Cindy Wigley
C/O: Dennis McDaniel
12380 US Highway 431
Guntersville, Alabama 35976

E: dmcdaniel@scoutpm.com

RE: Geotechnical Report
Douglas Campus – High School and New Gymnasium
Douglas, Marshall County, Alabama
TTL Project No. 000230503466.00

Dear Mr. McDaniel:

TTL, Inc. (TTL) is pleased to submit this Geotechnical Report for the above-referenced project. If you have questions regarding our report, or if additional services are needed, please do not hesitate to contact us.

The enclosed report contains a brief description of the site conditions and our understanding of the project. The geotechnical recommendations contained within this report are based on our understanding of the project, the results of our field exploration and laboratory tests, and our experience with similar projects.

We appreciate the opportunity to be of professional service during this phase of the project and look forward to working with you in the future.

Respectfully submitted,
TTL, Inc.

ALABAMA LICENSED 03/22/2024 No. 35221 Professional ENGINEER BRIAN EDWARD WYSOCK

Brian E. Wysock, P.E.
Senior Engineer

Oscar M. Gay, P.E.
Principal Engineer

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This Geotechnical Report has been prepared for the proposed Douglas High School expansions, multi-purpose building, and new gymnasium hereinafter referred to as the "project". The project will also include new parking lots and drive aisles associated with the new structures.

Below is a summary of geotechnical-related items to be considered for this project:

- 16 soil test borings were drilled to approximate depths of 5.5 to 11 feet below the ground surface representing the planned termination depth or until auger refusal was encountered on apparent weathered sandstone material.
- Perched groundwater was encountered at the western portion of the site, where the multi-purpose building is going to be located, as shallow as 7.5 feet below ground surface (bgs).
- Apparent weathered sandstone material was encountered throughout the site as shallow as 4 feet bgs. Therefore, consideration should be given to this relatively shallow weathered sandstone when grading the site and installing utilities, and a budget contingency should be established for potential bedrock removal.
- Clean soils from on-site cuts or excavations within the upper 4 feet should typically be suitable for re-use as fill. However, these materials should be expected to be difficult to work with due to their relatively low plasticity index. Compacted fill material for this project may also originate from an off-site borrow source.
- Initial site preparation is expected to require stripping and removal of existing topsoil, concrete, asphalt, and/or crushed aggregate depending on the location. Stripping should include, on average, the upper 5 to 9 inches of material at the site. Initial site preparation should also include demolishing/removing existing hardscapes from the construction areas.
- After stripping and initial cutting to grade is completed, the exposed soils should be evaluated via proofrolling. Based on proofrolling results, compaction of the exposed soils will likely be necessary in areas. After this compaction is completed, the building footprints should receive a secondary proofroll. Based on the secondary proofroll results, undercutting and replacement may still be necessary in select areas within the building footprints because of soil instability below the ground surface. Initial undercutting and replacement, prior to fill placement, should be expected in portions of the site near borings B-204, B-207, B-208, B-209, B-210, B-211, B-212, B-213, B-214, B-215, and B-216 where low and marginal consistency soils were encountered within the upper 2 to 5 feet of the ground surface.
- The new High School expansion structures, multi-purpose building, and gymnasium can be supported on typical concrete spread or strip foundations and slab-on-grade floors bearing on stable in-place soils or compacted fill. Based on our calculations, we recommend waiting at least 30 days after the placement of fill is completed within the gymnasium footprint before constructing the new gymnasium foundations.
- Typical asphaltic concrete pavements or rigid (Portland cement concrete) pavements are considered suitable for this site, based on the anticipated traffic conditions.

This summary is provided for convenience only. Individuals and entities that may need more details or technical information must read the report in its entirety to understand fully the information and recommendations provided for this project.

1.0 PROJECT INFORMATION

1.1 Project Description

Item	Description
Project Location	This project is located at Douglas High School (225 Eagle Drive) in Douglas, Alabama.
Proposed Construction	Based on the provided site plans, the planned High School expansions will include a new lunchroom, admin wing, and classroom wing. The planned construction also includes a new multi-purpose building west of the existing High School building, and a new competition gymnasium located in the field to the east of the existing High School. The new structures are assumed to match the existing school buildings in appearance and be single-story concrete masonry unit (CMU) construction with masonry walls on the exterior. The new High School lunchroom will be approximately 45 feet by 45 feet and attached to the southern edge of the existing building. The new High School admin wing will be approximately 100 feet long by 40 feet wide, and the new classroom wing will be approximately 200 feet long by 75 feet wide and will include 10 new classrooms. The new multi-purpose building will be approximately 160 feet long by 75 feet wide. The new gymnasium will be approximately 210 feet long by 120 feet wide and will include a basketball court with stands. The planned construction also includes new drive aisles and parking areas located around the new gymnasium.
Grading	Site grading plans are still being developed; however, based on the existing topography of the site, TTL assumes up to about 2 to 4 feet of cut/fill will typically be required. However, portions of the new gymnasium footprint are anticipated to receive up to about 8 or 9 feet of fill in order to reach the desired grades.
Anticipated Loads	Based on the type of construction, we assume the proposed High School expansion structures and the multi-purpose building will be moderately loaded and have maximum individual column loads of 75 kips or less and maximum wall loads of 8 kips per linear foot or less. We assume the new gymnasium will be relatively heavily loaded and have maximum individual column loads of 100 kips or less and maximum wall loads of 6 kips per linear foot or less.
Maximum Allowable Settlement	We have assumed post-construction settlement of 1-inch total and 0.5-inch differential (over a distance of 20 feet).

If the above information is not correct, please contact us so that we can make the necessary modifications to this document and our evaluation and recommendations, if needed.

1.2 Authorization

This geotechnical exploration was authorized by Marshall County Schools (Client) on January 12, 2024, by Purchase Order No. 24-000149. The scope of services provided by TTL is based on our Proposal No. 000230503466 (dated November 16, 2023). Additional reports for other Douglas Campus improvements have been prepared under separate covers.

1.3 Scope of Services

The planned scope of this exploration included 16 soil test borings spaced across the anticipated construction footprints. Boring locations are shown on the provided Boring Location Plan in Appendix A. Based on the collected data, we have developed geotechnical recommendations for site grading and shallow foundations.

2.0 EXPLORATION FINDINGS

2.1 Site Conditions

Item	Description
Site Conditions	The western portion of the site, where the new multi-purpose building will be located, is currently a paved parking lot. The center of the site, where the High School expansion structures will be located, is currently a paved parking lot and roadway. The eastern portion of the site, where the new drive aisles, parking lots, and gymnasium will be located, is currently a grass covered field with multiple overhead power lines present. There is a drainage ditch between the existing high school parking lot and the roadway with another between the roadway and the grass covered field.
Current Ground Cover	This site currently has a groundcover of topsoil, concrete, asphalt, and/or crushed aggregate depending on the location.
Existing Topography	Based on topographic information obtained by a TTL survey crew, the western portion of the site, where there is currently a parking lot, appears to be relatively flat. The central and eastern portions of the site exhibit moderate elevation changes (approximately 12 to 14 feet) generally sloping down to the east.

The photo is facing west from near boring B-216 and shows the grass covered field and existing Douglas High School building.

2.2 Site Geology

According to the *Generalized Geologic Map of Marshall County, Alabama*, by Thomas H. Sanford Jr. (1966), the site is located in the Alabama Valley and Ridge Geologic Physiographic Province and is in an area underlain by the Pottsville Formation. Rocks in the basin are Pennsylvanian in age and consist of shales, sandstones, conglomerates, and coal seams. Surface weathering of these strata produces residual soils consisting of clays, silts, and sands. Our borings encountered residual soils and possible fill, as well as weathered sandstones of the Pottsville Formation. There is not a distinct boundary between the residual soils and bedrock. Rather, some of the borings encountered a transitional zone of weathered bedrock. This transitional zone contains hard or dense soils and soft to moderately hard rock.

2.3 Subsurface Statigraphy

Subsurface conditions within the project limits were evaluated by performing 16 soil test borings at the approximate locations shown on the Boring Location Plan in Appendix A. Information from the borings is summarized in the table below.

Stratum	Material Description	Approximate Depths to Bottom of Stratum, bgs	Stratum Parameters
Surface Cover	Topsoil Asphalt Crushed Aggregate	Not Present to 7 inches Not Present to 3 inches Not Present to 9 inches	N/A
Fill	Sandy Lean Clay (CL) Silty Sand (SM)	Not Present to 4 feet	N-Values: 3 to 23 bpf MC: 11% to 22%
Residuum	Sandy Silty Clay (CL-ML) Lean Clay with Sand (CL) Sandy Lean Clay (CL) Fat Clay with Sand (CH) Sandy Fat Clay (CH) Clayey Sand (SC) Silty Sand (SM) Weathered Sandstone	B.T. or A.R. at (5.4 to 10.8 feet)	N-Values: 2 to 50+ bpf MC: 5% to 22% LL: 18 to 24 PL: 11 to 14 P200: 50.2% to 67.1%
bgs = Below Ground Surface; B.T. = Boring Termination; A.R. = Auger Refusal; bpf = Blows Per Foot MC = Moisture Content; PL = Plastic Limit; LL = Liquid Limit; P200 = passing No. 200 sieve			

The borings were performed with an ATV-mounted CME 550x drilling rig and included standard penetration test (SPT) sampling to evaluate soil density/consistency and to collect samples for review and testing. Penetration resistance values (N-values) were recorded in blows per foot (bpf); and soil samples were taken from the split barrel sampler, field classified, and transported to our laboratory for further testing. The samples were collected and classified by TTL personnel.

The Boring Logs presented in Appendix A represent our interpretation of the subsurface conditions based on tests and observations performed during the drilling operations at the test boring locations, visual examination of the soil samples by a geotechnical professional, and

laboratory tests conducted on retrieved soil samples. The USCS classifications enclosed in parentheses indicate a visual classification. The lines designating the interfaces between various strata on the Boring Logs represent the approximate strata boundaries; however, the transition between strata may be more gradual than shown. All data should only be considered accurate at the exact test boring location.

2.4 Groundwater Conditions

Perched groundwater was encountered at the western portion of the site as shallow as 7.5 feet bgs (corresponding to an elevation of 933 feet) at the time of drilling. Our observations indicate that groundwater will likely not impact construction for this project; however, perched groundwater was encountered as shallow as 4 feet bgs in other portions of the Douglas Campus and could potentially be encountered at this site.

Groundwater is generally present year-round or as a discontinuous, isolated, “perched”, or temporary water surface. Permanent groundwater is generally present year-round. Both types of groundwater surfaces may or may not be influenced by seasonal and climatic changes in precipitation, vegetation, surface runoff, water levels in nearby water bodies, and other factors. The groundwater level below the site may fluctuate up or down in response to such changes and may be at different levels than indicated on the boring logs at times after the exploration. Temporary groundwater generally develops as a result of seasonal and climatic conditions.

2.5 Laboratory Testing

Laboratory testing for this project included the determination of soil moisture contents for the collected samples. Four samples were selected for classification testing including Atterberg limits and soil grain size distribution. The soil classification test results are summarized in the table below. Detailed laboratory test data sheets are provided in Appendix A.

Soil Classification Test Results

Boring Number	Sample Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200	Moisture Content %	USCS Classification	Soil Description
B-201	4.8 – 6.3	20	12	8	67.1	16	CL	Sandy Lean Clay
B-207	0 – 1.5	18	11	7	57.6	19	CL-ML	Sandy Silty Clay
B-213	1.5 – 3	23	14	9	51.9	18	CL	Sandy Lean Clay
B-216	3 – 4.5	24	14	10	50.2	20	CL	Sandy Lean Clay

3.0 GEOTECHNICAL CONSIDERATIONS

The following geotechnical considerations have been prepared based on the data collected or developed during this project, our experience with similar projects, and our knowledge of sites with similar surface and subsurface conditions.

3.1 In-place Fill Soils

Fill soils were encountered in the western and central portions of the site to depths of up to about 4 feet bgs. The in-place fill soils encountered by the borings appeared to typically be stable; however, the overall quality of the fill soils cannot be assured with limited, widely spaced test borings. Careful proofrolling and possibly test pit excavations under the observation of the geotechnical engineer or their representative will be required in order to identify unstable fill soils that will require compacting or undercutting. We recommend the construction documents include contingencies (allowances and unit costs) for compacting and potential localized undercutting of these soils.

Fill that has been placed without engineering observation or documentation can sometimes contain objectionable inclusions or constituents, such as fibrous organic material, junk, debris, trash, excessively wet or high plasticity soils, or rock fragments. When such undesirable inclusions are present, the consistency or density of the fill cannot necessarily be correlated with conventional indicators, such as drive-sample blow counts or estimates of unconfined compressive strength of cohesive soils. For this reason, consistency descriptions of fill layers are typically not included on boring logs.

3.2 Low Consistency Soils

Near surface low consistency soils (N-value ≤ 6 bpf) were encountered in the central and eastern portions of the site in borings B-204, B-207, B-208, B-209, B-210, B-211, B-212, B-213, B-214, B-215, and B-216. Compaction, and potential undercutting and replacement, of these low consistency soils will be necessary to establish a stable subgrade. The Earthwork Recommendations section of this report includes project areas anticipated to require localized or general undercutting prior to placement of fill.

3.3 Low Plasticity Soils

Clean soils from on-site cuts or excavations within the upper 4 feet should typically be suitable for re-use as fill. However, these materials should be expected to be difficult to work with, due to their relatively low plasticity index; especially the silty clay (CL-ML) materials encountered which were observed to have a plasticity index as low as 7. Therefore, consideration should be given to using off-site borrow material with more favorable soil properties for this project.

3.4 Shallow Bedrock

The site is mapped as being underlain by the Pottsville Formation, and apparent weathered sandstone material was encountered as shallow as 4 feet bgs in the central and eastern portions of site in borings B-209 and B-212. Therefore, depending on planned grades and utility installations a budget contingency should be established for bedrock removal. If weathered sandstone is encountered within a foundation area, the bedrock should be undercut 2 feet or more below the planned bottom of foundation level and should then be backfilled with graded aggregate

base or compacted fill to provide uniform support and a "cushion" above the bedrock. Localized areas of shallow bedrock to be removed will likely require a hoe ram. Rock excavation could also potentially be required for utility installation, and consideration for shallow bedrock should be given when designing these features. Additionally, consideration could be given to placing compacted fill and raising the site grades, which would lower the possibility of encountering rock. The bedrock encountered is summarized in the table below.

Bedrock Encounter Summary

Boring Number	Boring Elevation	Approximate Depth to Bedrock	Approximate Bedrock Elevation
B-201	941.1 feet	10.8 feet	930.3 feet
B-202	939.9 feet	7.9 feet	932.0 feet
B-203	941.4 feet	8 feet	933.4 feet
B-204	943.3 feet	5 feet	938.3 feet
B-205	942.9 feet	5.5 feet	937.4 feet
B-206	943.7 feet	6.5 feet	937.2 feet
B-207	941.1 feet	6.5 feet	934.6 feet
B-208	940.9 feet	6.5 feet	934.4 feet
B-209	942.9 feet	4.5 feet	938.4 feet
B-210	939.8 feet	6.5 feet	933.3 feet
B-212	936.5 feet	4 feet	932.5 feet
B-213	936.2 feet	5 feet	931.2 feet
B-214	934.6 feet	9 feet	925.6 feet
B-215	932.8 feet	5 feet	927.8 feet
B-216	929.7 feet	7.5 feet	922.2 feet

3.5 Shallow Foundations

Typical concrete shallow spread or strip foundations and slab-on-grade floors bearing on stable in-place soils or properly compacted fill are considered appropriate. Considering the presence of fill and low consistency soils, we recommend that the construction documents include contingencies (allowances and unit costs) for compaction and potential localized undercutting based on testing during construction.

Due to the new gymnasium footprint receiving up to about 8 or 9 feet of fill, depending on the location, we recommend waiting at least 30 days after the placement of fill is completed before constructing the new gymnasium foundations in order to reduce the magnitude of the anticipated post-construction settlement.

3.6 Pavements

The project includes the construction of new pavements for drive aisles and parking areas associated with the new structures. These new drive aisles and parking areas are anticipated to have an asphaltic concrete pavement and be subjected to primarily passenger and vehicle school bus traffic with occasionally heavy trucks, such as garbage or delivery trucks. Consideration should be given to placing a rigid concrete pavement in areas regularly subjected to delivery and garbage trucks, such as dumpster pads and loading docks.

4.0 EARTHWORK RECOMMENDATIONS

4.1 Subgrade Preparation and Stabilization

4.1.1 Stripping

Subgrade preparation should begin with stripping to remove the existing topsoil, concrete, asphalt, crushed aggregate, and hardscapes from the planned construction areas.

- Old foundation/slab remnants, hardscapes, and utilities to be abandoned should be removed and disposed of off-site.
- Complete removal of existing trees, shrubs, and root systems should be completed prior to site grading operations. Care should be taken to properly backfill excavations and voids resulting from the tree removal.
- Existing underground utilities, if encountered, should be removed and re-routed outside of the new foundation footprint.
- Stripping should extend 10 feet beyond the construction footprint, where possible.
- The existing topsoil, concrete, asphalt, and crushed aggregate should be stripped from the site. Stripping depths should generally be 5 to 9 inches from the existing ground surface.
- Topsoil should be removed from the site or stockpiled for reuse in landscape and lawn areas, if the materials are acceptable for that purpose and if space allows.
- Concrete, asphalt, and crushed aggregate materials should be removed from the site or disposed of at designated onsite areas located outside the limits of current or future construction, at the owner's discretion and if space allows.

4.1.2 Proofrolling

After stripping and initial cutting to grade are completed, but prior to the placement of fill, the stability of the exposed subgrade soils should be evaluated by means of proofrolling. In areas where proofrolling is not practical, TTL's geotechnical engineer or designated representative should assess the subgrade by performing penetrometer tests and/or probing.

- Perform proofrolling with a rubber-tired vehicle having a gross vehicle weight of at least 20 tons (such as a fully loaded, tandem-axle dump truck).

- Proofrolling equipment should make multiple closely-spaced overlapping passes over the subgrade at a walking pace.
- The subgrade should be relatively smooth and free of wheel ruts, sheepsfoot roller dimples, loose clods of soil, or loose gravel. The subgrade should not be desiccated, cracked, wet, or frozen at the time of proofrolling.
- A TTL representative should observe the proofrolling to identify, document, and mark areas of unstable subgrade response, such as pumping, rutting, or shoving, if any.

4.1.3 Subgrade Preparation

The new High School expansion structures (the lunchroom, admin wing, and classroom wing), multi-purpose building, and gymnasium foundations may be supported by compacted fill or stable in-place soils, if confirmed by proofrolling or penetrometer results where proofrolling is not practical. New pavement areas may also be supported by compacted fill or stable in-place soils. After stripping and initial cutting to grade is completed, the exposed soils should be evaluated via proofrolling. Based on proofrolling results, compaction of the exposed soils will likely be necessary in areas. Compaction should be performed using the appropriate compaction roller (without the vibrator) to the extent no additional compaction (by visual observation) is achieved. After this compaction is completed, the site should receive a secondary proofroll. Based on the secondary proofroll results, localized or general undercutting may still be necessary because of soil instability below the ground surface.

Undercutting should be expected within the new admin wing, classroom wing, gymnasium, and pavement areas near borings B-204, B-207, B-208, B-209, B-210, B-211, B-212, B-213, B-214, B-215, and B-216 where low and marginal consistency soils were encountered. Additionally, locations where placement of fill is required to reach plan subgrade elevations, especially for the gymnasium building, we recommend preliminary undercut and replacement be performed to reduce the potential for consolidation beneath the new fill sections. Therefore, a contingency should be included in the contract documents (unit costs per cubic yard in place) for undercutting and replacement of the subgrade materials. If undercutting is necessary near an existing structure, the contractor should take care to avoid undermining existing structure footings. After compaction and undercutting is completed and a stable subgrade is established, compacted fill should be placed in thin lifts to the planned finished grades.

Based on our estimates, we recommend waiting at least 30 days after the placement of fill is completed within the gymnasium footprint before constructing the new gymnasium foundations due to this area being anticipated to receive up to about 8 or 9 feet of fill. This waiting period will be necessary to provide a tolerable post-construction settlement of 1-inch or less for the gymnasium.

4.2 Compacted Fill

Clean soils from on-site cuts or excavations within the upper 4 feet should typically be suitable for re-use as fill. However, these materials should be expected to be difficult to work with, due to their relatively low plasticity index. Compacted fill material for this project may also originate from an off-site borrow source. Regardless whether the material is from on-site or off-site, soil identified to be used as fill should be maintained near optimum moisture, and the soil should be free of debris and organics. Borrow material from off-site sources should be tested by TTL to evaluate compliance with the specifications (allow 3 to 4 days for sampling and testing soil), prior to delivery to the site. Off-site borrow material should consist of clayey sand or lean clean exhibiting a USCS soil classification of SC or CL and exhibit properties provided in the table below.

MATERIAL TYPE	CHARACTERISTICS	COMPACTION PROCEDURES	COMPACTION CONTROL [1, 2]
SOIL BORROW (FILL)	Soil Classification: SC or CL Maximum particle size: 3 inches Maximum gravel and oversize particle content: 30 percent retained on a ¾-inch sieve Maximum allowable organic content: 3 percent by weight, but large roots are not allowed Minimum Fines Passing the No. 200 Sieve: 30 percent Liquid Limit (LL): Less than 50 Plasticity Index (PI): 10 to 30	Maximum loose lift thickness: 8 inches for ride-on equipment; 6 inches for hand-held or walk-behind/remote controlled equipment Compaction Requirement: Compaction should be to at least 98 percent of the standard Proctor maximum dry density (ASTM D 698) Moisture content at time of compaction: Within plus to minus 3 percent of the material's optimum moisture content	In-place density tests should be performed to evaluate fill compaction. The number of tests should be determined by our engineer once a grading plan is available.
GRADED AGGREGATE BASE	Crushed Aggregate Base – Section 825 A or B of the Alabama Department of Transportation (ALDOT) specifications	Maximum loose lift thickness: 8 inches Compaction requirement: At least 98 percent of the standard Proctor maximum (ASTM D 698) dry density Moisture content at time of compaction: Within plus to minus 3 percent of the material's optimum moisture content	

[1]For preliminary planning only. The project testing agency should determine the actual test frequency.
[2] In addition, the fill must be stable under the influence of compaction equipment. Heavy construction traffic should not be allowed to travel on compacted fill areas.

It is likely that some of the on-site soils may require adjustment to their moisture content to facilitate compaction. Typically, soils can be dried by spreading the material to increase the exposed surface area and discing one or more times to give the entire thickness of the wet soil the opportunity to dry in the sunlight. However, drying the soil may be problematic or not feasible if grading is taking place in cool, wet weather. In hot, dry weather, some of the soils may dry to the point that water must be added to facilitate their compaction. Based on the laboratory test results for this project, the on-site soils are likely wet of optimum and may require drying.

Compacted fill material should not be placed on surfaces that are muddy, frozen, contain frost, or are otherwise deemed unsuitable by TTL's geotechnical representative. Proper compaction of compacted fill material should be achieved by using sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers, or other equipment suitable for the soils being compacted.

4.3 Excavation Conditions

Temporary construction excavations should be sloped or shored by the contractor in accordance with current OSHA safety guidelines. The contractor's "competent person" should evaluate temporary excavations daily and determine the specific soil types and temporary slope or shoring measures necessary according to current OSHA safety guidelines. TTL assumes no responsibility for excavations, shoring, or jobsite safety, which are the sole responsibility of the general contractor.

4.4 Drainage Considerations

It will be important for the contractor to maintain the construction site in a positively drained condition both during and after construction. Storm runoff should not be allowed to pond on the site. Ponding water can lead to the deterioration of the subgrade surface necessitating over-excavation of the softened soil and/or settlement of foundations. Project specifications should clearly detail the contractor's responsibility to maintain site drainage and to notify the designers and the geotechnical engineer if conditions are encountered at the site that would require remedial treatment or which could affect the integrity of the soils or the proposed foundations.

Weather conditions at the time of site preparation will directly impact earthmoving activities. The in-place soils (and anticipated compacted fill borrow soil) can be expected to degrade during seasonal wet weather conditions typical of the winter and early spring months (typically November through April) when there is limited drying potential and seasonal high rainfall. Additional soil processing and drying efforts are typically required during wet weather conditions. Commencing site preparation during wet weather conditions could potentially result in construction delays and possible additional site work costs. The use of dense graded crushed aggregate fill does not eliminate, but can help alleviate some of these concerns. The performance of slab-on-grade floors, shallow foundation systems, and pavements are dependent in part on stability of moisture conditions of the underlying soils. Poor site drainage could result in delays in construction because soft soils will need to be removed and treated or replaced. It is the contractor's responsibility to grade the site in a manner that promotes positive drainage away from the construction area.

5.0 INFRASTRUCTURE RECOMMENDATIONS

5.1 Utitities

Typically, the bedding and initial backfill around buried utilities are placed to support and protect the piping. The material above this initial backfill (secondary backfill) also helps protect the piping

and to support the overlying slabs and/or pavements. Inadequate compaction of this material can lead to excessive settlement of the backfill and premature distress in foundations, slabs, or pavements. Therefore, we recommend the following:

- Whenever possible, trench and install utilities prior to other work (such as before foundation excavations, paving, etc. are performed).
- Place, moisture-condition, and compact the secondary backfill in accordance with the applicable project requirements. The secondary backfill should be a flowable fill or the same borrow soil as under slabs or pavements and meet the compaction requirements for compacted fill.

In deeper excavations (greater than 5 feet) of limited width, the use of flowable fill should be considered as backfill. When properly designed (50 psi to 100 psi compressive strength), this material can be excavated easily later if required. While the material costs may be higher than for other backfill soils, the use of flowable fill is usually faster, requires no compaction and no compaction testing when used for this purpose. General criteria for flowable fill can be found in ACI 229R.

Backfilling of utility ditches should meet the minimum compaction recommendations outlined in the Earthwork Recommendations section of this report. Utility trenches and temporary excavations should be sloped or benched in accordance with current OSHA safety guidelines. It is the responsibility of the contractor to provide safe excavations, and we assume no responsibility for jobsite safety.

5.2 Asphaltic Concrete Pavements

We understand the project includes the construction of new asphaltic concrete pavements for the drive aisles and parking areas associated with the new structures. Expected traffic will include passenger vehicles, school buses, and occasional heavy trucks, such as garbage and delivery trucks; therefore, both standard-duty and heavy-duty asphaltic concrete pavement recommendations are provided below. Standard-duty pavement should be used in parking areas subjected to primarily passenger vehicle traffic only. Heavy-duty pavement should be used in the drive aisles and areas to be regularly subjected to school buses (75 or less per day) and occasional heavy trucks (2 or less per day). Specific traffic information was not readily available at the time of this report; therefore, it is possible a more substantial pavement buildup could be required depending on the actual traffic loads and volume.

Material (ALDOT)	Layer Thickness (in)	
	Standard-Duty	Heavy-Duty
Section 424A (1/2" Max Agg. Size) Superpave Bituminous Concrete Wearing Surface	1.5	1.5
Section 405 Tack Coat	-	-
Section 424B (3/4" Max Agg. Size) Superpave Bituminous Concrete Binder Layer	1.5	2.5
Section 401 Prime Coat	-	-
Section 825 Graded Aggregate Base – Type A or B (100% standard Proctor density)	6.0	8.0

Prime coat can be omitted if the binder layer is placed the same day the base is moisture conditioned and compacted. The thickness of crushed aggregate base outlined in the table above is a minimum thickness. Our experience indicates that a specified thickness is typically increased by at least 1 inch to account for variability in construction methods so that the average thickness is equal to or greater than the minimum thickness.

5.3 Rigid Concrete Pavements

Consideration should be given to placing a rigid concrete pavement in areas regularly subjected to garbage and delivery trucks, such as potential dumpster pads and loading docks. A standard-duty Portland cement concrete (PCC) pavement should be considered for these areas.

Standard-duty PCC pavements should exhibit a minimum 8-inch thickness and should also be formed with a properly designed 4,000 psi compressive strength concrete mixture (minimum 600 psi flexural strength) placed at a slump of 5-inches or less. These PCC pavements should be placed over a minimum 4-inch layer of ALDOT Section 825B Crushed Aggregate Base bearing on stable in-place soils or compacted fill.

The concrete should contain entrained air to improve durability. The air content should be compatible with the maximum aggregate size and the project location. The pavement should be designed and constructed in accordance with applicable ACI guidelines, including joint spacing. The pavement surface should be sloped to promote drainage.

Additional considerations for PCC pavement design and construction are provided below:

- PCC pavements which are not tied to curb and gutter or adjoining pavement should have edges thickened to 10 inches due to the lack of load transfer.
- Isolation joint material should comply with applicable ASTM standards. The upper one inch of the joint material should be removed and the joint sealed with a self-leveling flexible joint sealant immediately after the curing period and prior to the opening to traffic.

- Construction joints should be properly cleaned and sealed with the same type of joint sealant.
- Control joints should be sawed as soon as the concrete will allow. The joints should be subsequently sealed to reduce surface water infiltration into the prepared subbase.
- Control joints should extend to a depth of at least ¼ of the pavement thickness and should be placed within a maximum 15-foot spacing. The design and location of all pavement joints should be in accordance with recommendations of the Portland Cement Association (PCA) and ACI 330.
- Construction joints (excluding saw joints) should be underlain by a non-woven geotextile (about 2 feet wide) to reduce the potential for the upward movement of soil fines through the joints.
- Dowel sizing and spacing for construction joints should conform to the recommendations in ACI 330.
- Loading (traffic) should not be allowed until the concrete has achieved at least 85% of its design strength.

5.4 Pavement Considerations

Experience has shown that most pavement failures (asphaltic or rigid concrete) are caused by localized soft spots in the subgrade or inadequate drainage. Proofrolling observed by the geotechnical engineer can help identify weak areas in the subgrade, as discussed earlier. However, the civil design must include proper drainage to reduce softening of the subgrade, soil migration, and pumping failures. Good perimeter drainage around the pavements is essential. Isolated areas that experience premature failure should be promptly repaired to reduce the potential of spreading to adjacent areas.

Site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade soils may be disturbed due to utility excavations, construction traffic, desiccation, or rainfall. As a result, sections of the pavement subgrade may not be suitable for pavement construction and require corrective action. The subgrade should be evaluated at the time of paving by proofrolling as described earlier in this report. Particular attention should be given to high traffic areas that were rutted and disturbed by construction traffic and where backfilled trenches are located. Areas where unsuitable conditions are detected should be repaired by removing and replacing materials with compacted fill as previously detailed.

During construction of the aggregate base, in-place density tests and thickness checks should be performed to evaluate compliance with project specifications. If a significant delay occurs between installation of the aggregate base and installation of the pavement, the aggregate base should again be proofrolled prior to paving to check for a loss in stability. Base materials “contaminated” with soil materials should be completely removed and replaced.

Pavement recommendations in this report do not account for construction traffic. We recommend construction traffic not be allowed on installed pavement layers. If desired, construction traffic can use Graded Aggregate Base (GAB) layers, as long as the GAB is re-evaluated and repaired prior to placement of asphaltic concrete. Repair may require removal of some or all of the GAB if it has become contaminated with soil. The soil subgrade may also require repairs consisting of undercutting and replacing with compacted fill or additional GAB. Subgrade repairs needed as a result of construction traffic on the GAB should not result in extra charges to the owner.

Maintenance is essential to good, long-term performance of pavements. Cracks and joints should be sealed annually with a heavy-duty sealer.

6.0 STRUCTURAL RECOMMENDATIONS

6.1 Seismic Site Classification

Based on the 2018 edition of the International Building Code (IBC), ASCE 7-16, and our interpretations of the site conditions encountered, we recommend Seismic Site Class C for seismic design of the proposed structures. This seismic site classification is based upon the weighted N-value method and assumes the recommendations for site grading and stabilization in the report are followed. The structural engineer is responsible for determining the seismic design category.

6.2 Foundation Considerations

Shallow concrete spread or strip foundations can be used to support the proposed structures. Provided the site is prepared using the earthwork and ground improvement recommendations in this report, shallow foundations can be supported by stable in-place soils or newly placed and properly compacted fill. Foundation design recommendations are provided in the table below.

Design Considerations	Value
Suitable bearing soil	Stable in-place soil or compacted fill meeting requirements in Section 4.2
Minimum bearing depth below exterior grade for perimeter foundations	24 inches
Minimum bearing depth below floor level for interior foundations	18 inches
Minimum spread footing size	24 inches
Minimum strip footing width	18 inches
Allowable net bearing pressure for sustained loads	2,000 psf
Allowable net bearing pressure for transient loads	2,500 psf

Design Considerations	Value
Ultimate coefficient of friction between concrete and bearing soil for lateral load resistance	0.35
Minimum factor of safety for lateral resistance from friction	1.5
Ultimate passive pressure from soil against vertical face of footing for lateral load resistance (Do Not Use if footing is formed)	200 psf per vertical foot Neglect resistance in top 1 foot unless ground surface is protected by concrete slabs or pavement
Minimum factor of safety for lateral resistance from passive soil pressure	2.0
Total unit weight for backfill over footings for computing ultimate uplift resistance	100 pcf
Minimum factor of safety for uplift resistance from soil backfill weight	2.0

The configuration of the foundation system, including reinforcement, is the responsibility of the project structural engineer. If new footings are within a short distance (5 feet or less) from an existing footing, we recommend the new footings bear at the same elevation as the existing footings. The new footing bearing elevation should match the existing footing bearing elevation for a horizontal distance of at least twice the thickness of the new footing prior to stepping down to the recommended footing bearing depth. Additionally, new footings should step down as necessary to maintain the recommended minimum footing bearing depth.

A TTL geotechnical engineer or designated representative should observe the foundation excavations in order to assess the condition of the bearing surfaces. Prior to the placement of steel reinforcement and concrete, the TTL representative should determine if the bearing materials are satisfactory for supporting foundations by performing shallow hand auger borings and using a dynamic cone penetrometer. Localized foundation undercutting of loose, in-place soils may be required in some areas. The necessary depth of localized undercutting should be based upon the penetrometer results at the bearing soil elevation.

During construction, care should be taken to avoid the collection of surface runoff on the site. Surface runoff should be drained away from excavations and not allowed to pond. Soils exposed at the bottom of all satisfactory excavations should be protected from disturbance, excessive drying, freezing, or rain. If the placement of structural concrete is delayed for an extended period, a 2 to 3-inch lean concrete “mud footing” should be placed in the foundation excavation. Prior to the placement of “mud footings” or structural concrete, the exposed soils in the bottom of the foundation should be re-tamped to densify any loosened bearing material with an appropriate compactor. Soil or other loose material should be removed from the “mud footing” surface before reinforcement steel and concrete are placed.

6.3 Floor Slabs

Concrete slab-on-grade floors supported on stable in-place soils or compacted fill are considered appropriate for this project. For the new structures, slab-on-grade floors should be placed on a minimum 4-inch layer of crushed aggregate material (with a typical plastic vapor barrier). A modulus of subgrade reaction, k, of 100 pci may be used for design of floor slabs.

7.0 LIMITATIONS

TTL understands that this Geotechnical Report will be used by Marshall County Schools (Client), and various designers and contractors involved with the design of the project. TTL should be invited to attend project meetings (in person or teleconferencing) or be contacted in writing to address applicable issues relating to the geotechnical engineering aspects of the project. TTL should also be retained to review the final construction plans and specifications to evaluate if the information and recommendations in this Geotechnical Report have been properly interpreted and implemented in the design and specifications. The contractor and applicable subcontractors should familiarize themselves with this report prior to the start of their construction activities, contact TTL for interpretation or clarification of the report, retain the services of their own consultants to interpret this report, or perform additional geotechnical testing prior to bidding and construction.

This Geotechnical Report is based upon the information provided to us by the Client and the design professionals associated with the project, exploratory borings drilled within the project limits, laboratory testing of selected soil samples recovered during drilling of the exploratory borings, and our engineering analyses and evaluation. The Client and readers of this Geotechnical Report, should realize that subsurface variations and anomalies may exist across the site and between the exploratory boring locations. The Client and readers should realize that site conditions can change due to the modifying effects of seasonal and climatic conditions and conditions at times after the exploration may be different than reported herein.

Unless stated otherwise in this report or in the contract documents between TTL and Client, our scope of services for this project did not include, either specifically or by implication, environmental or biological assessment of the site or buildings, or identification or prevention of pollutants, hazardous materials, or conditions at the site or within buildings. If the Client is concerned about the potential for such contamination or pollution, TTL should be contacted to provide a scope of additional services to address the environmental concerns. Also, permitting, site safety, excavation support, and dewatering requirements are the responsibility of others.

This Geotechnical Report has been prepared for the exclusive use of the Client and the project design professionals for specific application to this project. This Geotechnical Report has been prepared in accordance with generally accepted geotechnical engineering practices using that level of care and skill ordinarily exercised by licensed members of the engineering profession

currently practicing under similar conditions in the same locale. No warranties, express or implied, are intended or made. Additional information about the use and limitations of a geotechnical report is provided within the Geoprofessional Business Association document included at the end of this report.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

APPENDIX A

Site Location Map

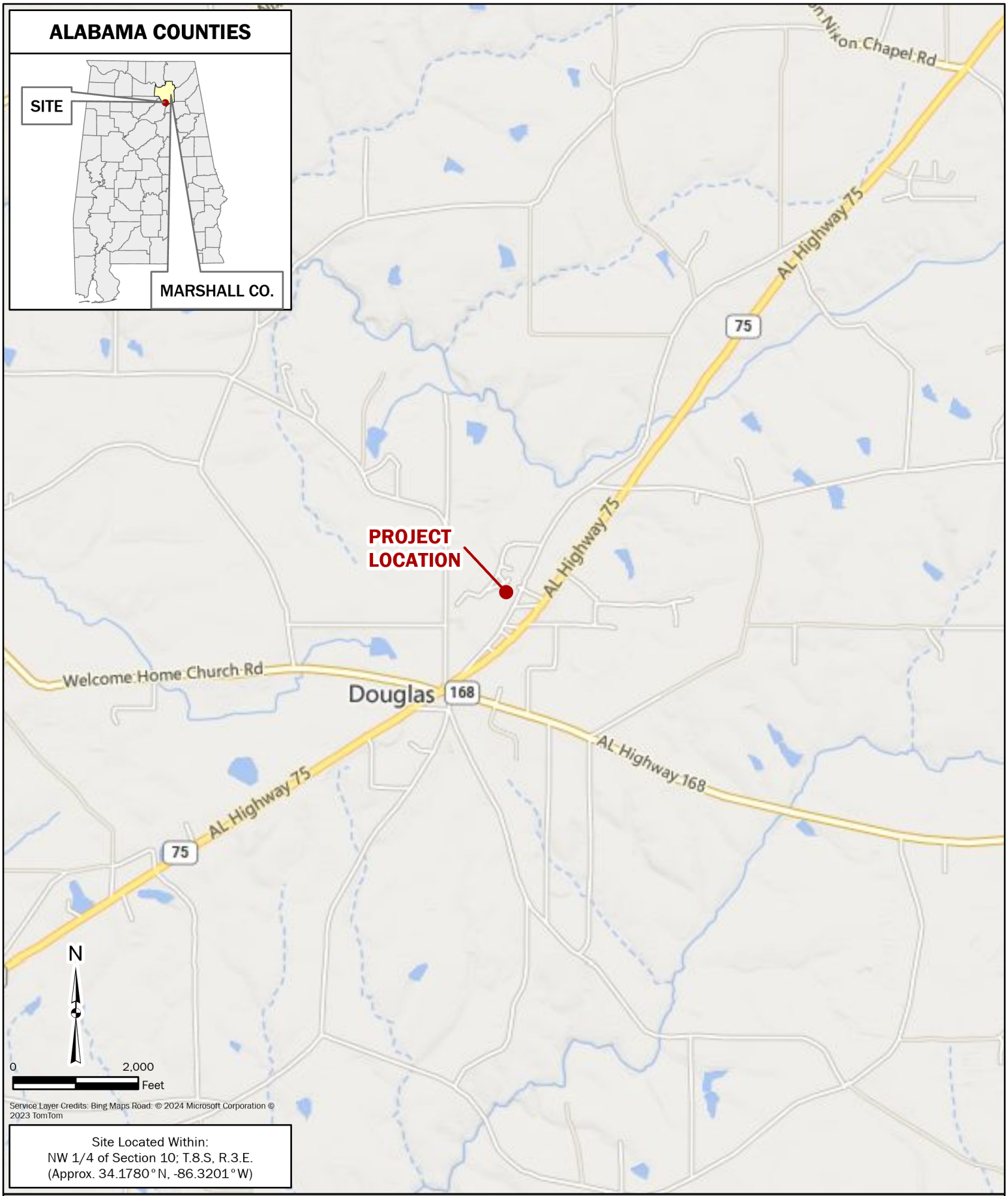
Boring Location Plan

Legend Sheets – Soil

Boring Logs

Cross Sections

Laboratory Test Data



Site Located Within:
NW 1/4 of Section 10; T.8.S, R.3.E.
(Approx. 34.1780°N, -86.3201°W)

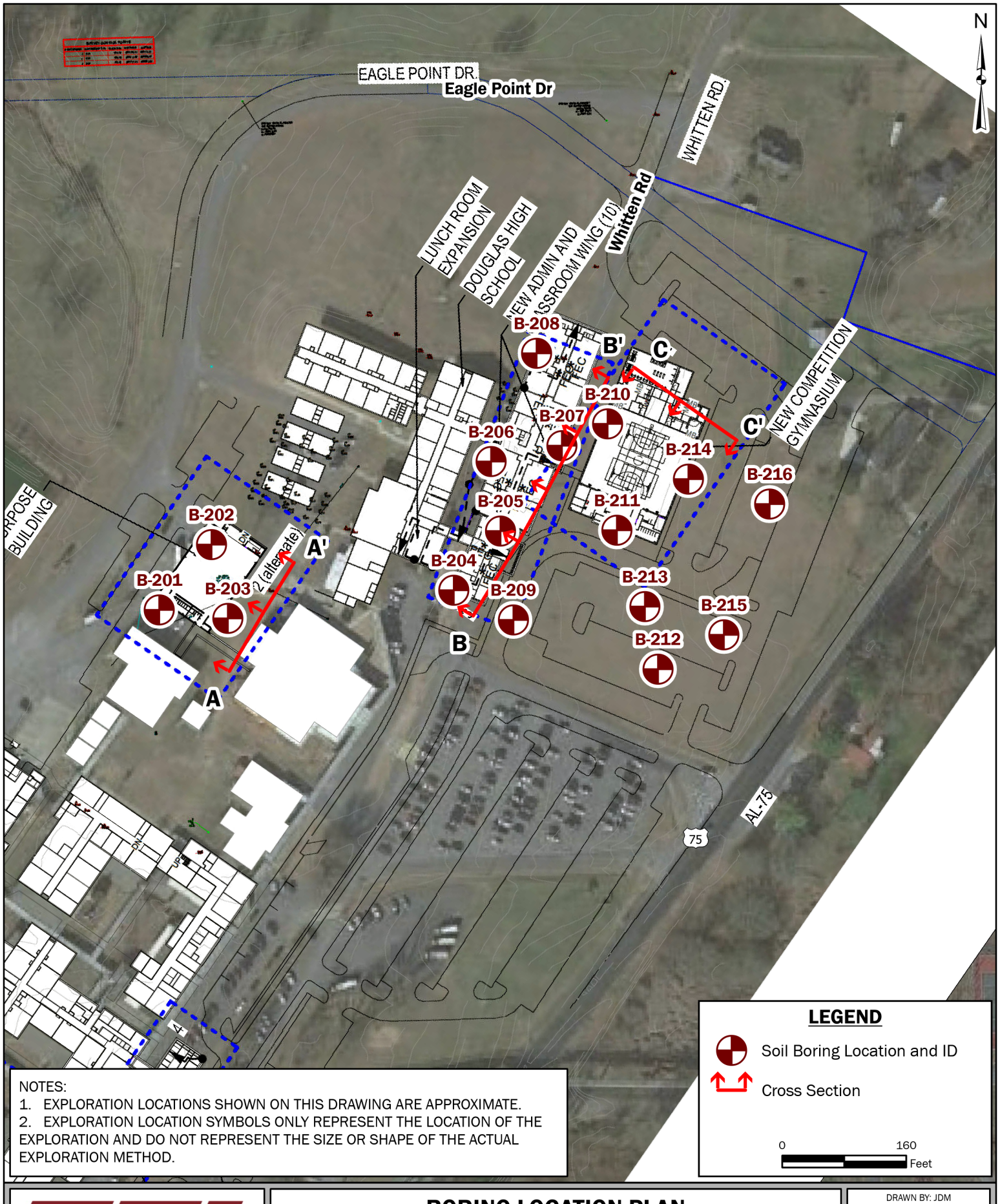
TTL

SITE LOCATION MAP

MARSHALL COUNTY SCHOOLS
DOUGLAS CAMPUS
DOUGLAS, MARSHALL COUNTY, ALABAMA

BASEMAP: Microsoft Bing Street Map (See Service Layer Credits).

DRAWN BY: JDM
CHECKED BY: CH
DRAWING DATE: 2/1/2024
REVISION DATE: N/A
TTL JOB NO.: 23-05-03466.00
APPROX. SCALE: 1 in = 2,000 ft



NOTES:
1. EXPLORATION LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE.
2. EXPLORATION LOCATION SYMBOLS ONLY REPRESENT THE LOCATION OF THE EXPLORATION AND DO NOT REPRESENT THE SIZE OR SHAPE OF THE ACTUAL EXPLORATION METHOD.

TTL

BORING LOCATION PLAN

MARSHALL COUNTY SCHOOLS

DOUGLAS CAMPUS - HIGH SCHOOL AND NEW GYMNASIUM

DOUGLAS, MARSHALL COUNTY, ALABAMA

BASEMAP: Google Earth Satellite Imagery, 1/31/2022.

DRAWN BY:	JDM
CHECKED BY:	CH
DRAWING DATE:	2/1/2024
REVISION DATE:	N/A
TTL JOB NO.:	23-05-03466.00
APPROX. SCALE:	1 in = 160 ft

SOIL LEGEND

FINE- AND COARSE-GRAINED SOIL INFORMATION

FINE-GRAINED SOILS (SILTS AND CLAYS)

SPT N-Value	Consistency	Estimated Q_u (TSF)
0 - 1	Very Soft	0 - 0.25
2 - 4	Soft	0.25 - 0.5
5 - 8	Firm	0.5 - 1.0
9 - 15	Stiff	1.0 - 2.0
16 - 30	Very Stiff	2.0 - 4.0
31+	Hard	4.0+

Q_u = Unconfined Compression Strength

COARSE-GRAINED SOILS (SANDS AND GRAVELS)

SPT N-Value	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
51+	Very Dense

PARTICLE SIZE

Name	Size (US Std. Sieve)
Boulders	>300 mm (>12 in.)
Cobbles	75 mm to 300 mm (3 - 12 in.)
Coarse Gravel	19 mm to 75 mm (3/4 - 3 in.)
Fine Gravel	4.75 mm to 19 mm (#4 - 3/4 in.)
Coarse Sand	2 mm to 4.75 mm (#10 - #4)
Medium Sand	0.425 mm to 2 mm (#40 - #10)
Fine Sand	0.075 mm to 0.425 mm (#200 - #40)
Silts and Clays	< 0.075 mm (< #200)

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Terms	Percent of Dry Weight
"Trace"	< 15
"With"	15 - 30
Modifier	> 30

RELATIVE PROPORTIONS OF CLAYS AND SILTS

Descriptive Terms	Percent of Dry Weight
"Trace"	< 5
"With"	5 - 12
Modifier	> 12

CRITERIA FOR DESCRIBING MOISTURE CONDITION

Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp, but no visible water
Wet	Visible free water, usually soil is below water table

CRITERIA FOR DESCRIBING CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure
Moderate	Crumbles or breaks with considerable finger pressure
Strong	Will not crumble or break with finger pressure

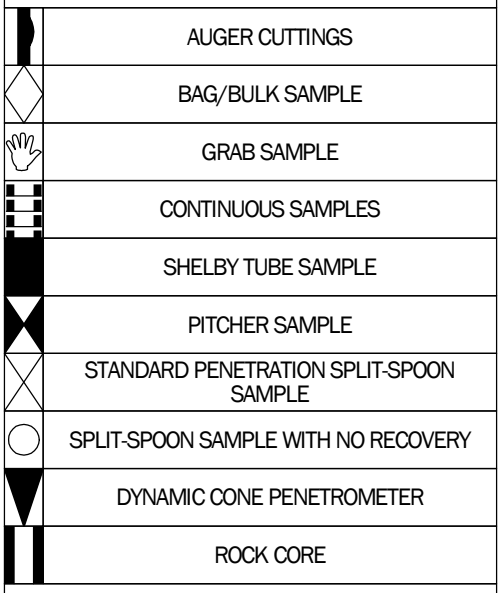
CRITERIA FOR DESCRIBING STRUCTURE

Description	Criteria
Stratified	Alternating layers of varying material or color with layers at least 6 mm thick; note the thickness
Laminated	Alternating layers of varying material or color with the layers less than 6 mm thick; note thickness
Fissured	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided	Fracture planes appear polished or glossy, sometimes striated
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed	Inclusion of small pockets of different soils such as small lenses of sand scattered through a mass of clay; note thickness
Homogeneous	Same color and appearance throughout

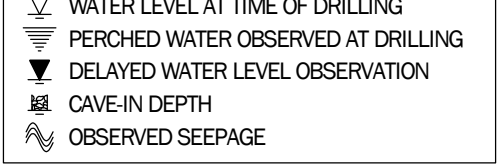
ABBREVIATIONS AND ACRONYMS

WOH	Weight of Hammer	N-Value	Sum of the blows for last two 6-in increments of SPT
WOR	Weight of Rod		
Ref.	Refusal	NA	Not Applicable or Not Available
ATD	At Time of Drilling	OD	Outside Diameter
DCP	Dynamic Cone Penetrometer	PPV	Pocket Penetrometer Value
Elev.	Elevation	SFA	Solid Flight Auger
ft.	feet	SH	Shelby Tube Sampler
HSA	Hollow Stem Auger	SS	Split-Spoon Sampler
ID	Inside Diameter	SPT	Standard Penetration Test
in.	inches	USCS	Unified Soil Classification System
lbs	pounds		

SAMPLERS AND DRILLING METHODS



WATER LEVEL SYMBOLS



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UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

COARSE GRAINED SOILS (>50% of the material is larger than the #200 sieve)	GRAVELS (>50% of coarse fraction is larger than the #4 sieve)	CLEAN GRAVEL WITH <5% FINES	Cu > 4 Cc = 1-3	GW	Well-graded gravels, gravel-sand mixtures with trace or no fines
			Cu < 4 and/or Cc < 1 Cc > 3	GP	Poorly-graded gravels, gravel-sand mixtures with trace or no fines
		GRAVEL WITH 5% TO 12% FINES	Cu > 4 Cc = 1-3	GW-GM	Well-graded gravels, gravel-sand mixtures with silt fines
				GW-GC	Well-graded gravels, gravel-sand mixtures with clay fines
			Cu < 4 and/or Cc < 1 Cc > 3	GP-GM	Poorly-graded gravels, gravel-sand mixtures with silt fines
				GP-GC	Poorly-graded gravels, gravel-sand mixtures with clay fines
		GRAVEL WITH MORE THAN 12% FINES		GM	Silty gravels, gravel-silt-sand mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
				GC-GM	Clayey gravels, gravel-sand-clay-silt mixtures
	SANDS (>50% of coarse fraction is smaller than the #4 sieve)	CLEAN SAND WITH <5% FINES	Cu > 6 Cc = 1-3	SW	Well-graded sands, sand-gravel mixtures with trace or no fines
			Cu < 6 and/or Cc < 1 Cc > 3	SP	Poorly-graded sands, sand-gravel mixtures with trace or no fines
		SAND WITH 5% TO 12% FINES	Cu > 6 Cc = 1-3	SW-SM	Well-graded sands, sand-gravel mixtures with silt fines
				SW-SC	Well-graded sands, sand-gravel mixtures with clay fines
			Cu < 6 and/or Cc < 1 Cc > 3	SP-SM	Poorly-graded sands, sand-gravel mixtures with silt fines
				SP-SC	Poorly-graded sands, sand-gravel mixtures with clay fines
		SAND WITH MORE THAN 12% FINES		SM	Silty sands, sand-gravel-silt mixtures
				SC	Clayey sands, sand-gravel-clay mixtures
				SC-SM	Clayey sands, sand-gravel-clay-silt mixtures
FINE GRAINED SOILS (>50% of material is smaller than the #200 sieve)		SILTS & CLAYS (Liquid Limit less than 50)		ML	Inorganic silts with low plasticity
				CL	Inorganic clays of low plasticity, gravelly or sandy clays, silty clays, lean clays
				CL-ML	Inorganic clay-silts of low plasticity, gravelly clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
		SILTS & CLAYS (Liquid Limit more than 50)		MH	Inorganic silts of high plasticity, elastic silts
				CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays and organic silts of high plasticity

USCS - HIGHLY ORGANIC SOILS

Primarily organic matter, dark in color, organic odor

PT	Peat, humus, swamp soils with high organic contents

OTHER MATERIALS

- BITUMINOUS CONCRETE (ASPHALT)
- CONCRETE
- CRUSHED STONE/AGGREGATE BASE
- TOPSOIL
- FILL
- UNDIFFERENTIATED ALLUVIUM
- UNDIFFERENTIATED OVERBURDEN
- BOULDERS AND COBBLES

UNIFORMITY COEFFICIENT

$$C_u = D_{60}/D_{10}$$

COEFFICIENT OF CURVATURE

$$C_C = (D_{30})^2/(D_{60} \times D_{10})$$

Where:

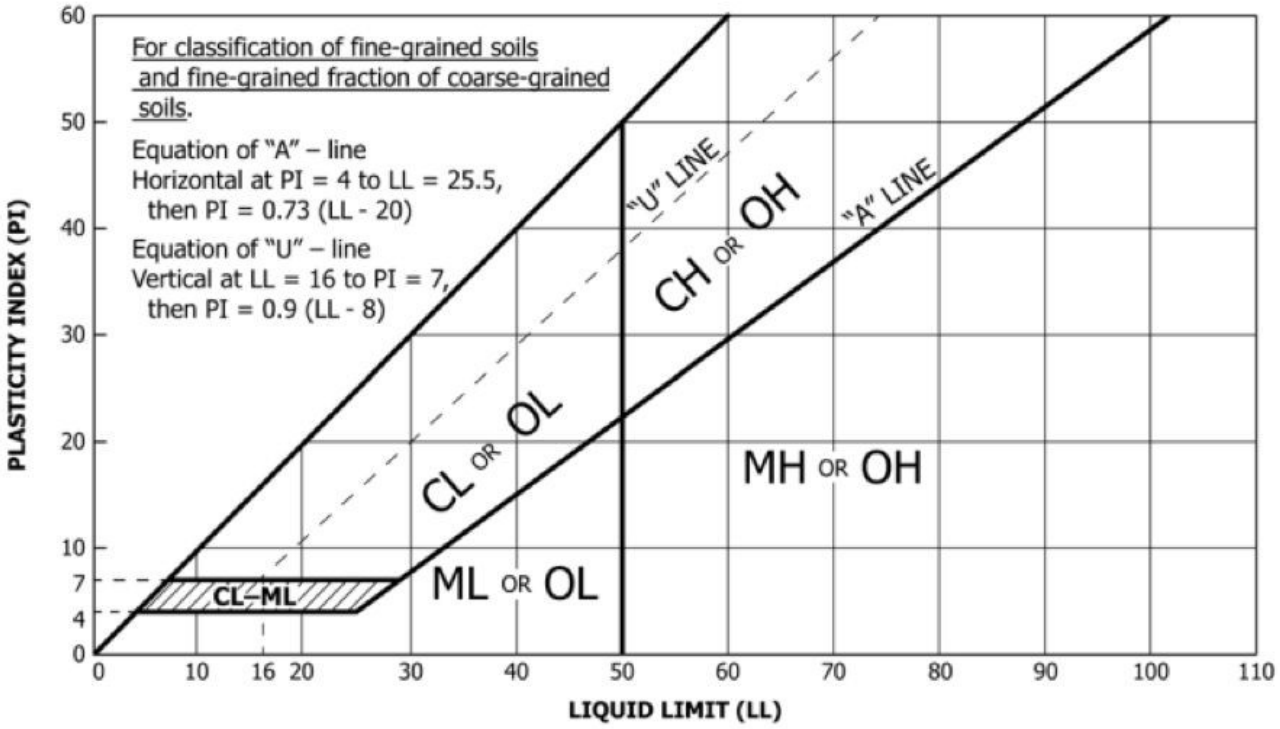
D_{60} = grain diameter at 60% passing

D_{30} = grain diameter at 30% passing

D_{10} = grain diameter at 10% passing

TTL

PLASTICITY CHART FOR USCS CLASSIFICATION OF FINE-GRAINED SOILS



IMPORTANT NOTES ON TEST BORING RECORDS

1) The report and graphics key are an integral part of these logs. All data and interpretations in this log are subject to the explanations and limitations stated in the report.

2) Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual or differ from those shown. Solid lines are used to indicate a change in the material type, particularly a change in the USCS classification. Dashed lines are used to separate two materials that have the same material type, but that differ with respect to two or more other characteristics (e.g. color, consistency).

3) No warranty is provided as to the continuity of soil or rock conditions between individual sample locations.

4) Logs represent general soil and rock conditions observed at the point of exploration on the date indicated.

5) In general, Unified Soil Classification System (USCS) designations presented on the logs were based on visual classification in the field and were modified where appropriate based on gradation and index property testing.

6) Fine-grained soils that plot within the hatched area on the Plasticity Chart, and coarse-grained soils with between 5% and 12% passing the #200 sieve require dual USCS symbols as presented on the previous page.

7) If the sampler is not able to be driven at least 6 inches, then 50/X" indicates that the sampler advanced X inches when struck 50 times with a 140-pound hammer falling 30 inches.

8) If the sampler is driven at least 6 inches, but cannot be driven either of the subsequent two 6-inch increments, then either 50/X" or the sum of the second 6-inch increment plus 50/X" for the third 6-inch increment will be indicated.
Example 1: Recorded SPT blow counts are 16 - 50/4", the SPT N-value will be shown as N = 50/4"
Example 2: Recorded SPT blow counts are 18 - 25 - 50/2", the SPT N-value will be shown as N = 75/8"

Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-201

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/10/2024*
Logged by:	*Chase Howell*	Boring Depth:	*10.8 feet*
Equipment:	*CME 550X*	Boring Elevation:	*941.1 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338583.800 E: 508828.600*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	▽ Water Level at Time of Drilling:	*8 ft BGS*
		▨ Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings. The pavement penetration was patched with cold mix asphalt patch.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

▼ Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			ASPHALT (3 inches)					
			FILL: SANDY LEAN CLAY, red and yellow, moist (CL)					
940	1					9 - 9 - 6 N = 15		MC=20
	2							
						7 - 7 - 7 N = 14		MC=22
	3							
	4		**RESIDUUM:** SANDY LEAN CLAY, stiff to firm, brown, moist (CL)			4 - 4 - 7 N = 11		MC=17
	5			67.1		5 - 3 - 4 N = 7		MC=16, PL=11, LL=20
935	6							
	7							
			FAT CLAY with SAND, firm, brown, moist (CH)			5 - 3 - 4 N = 7		MC=13
	8			▽				
	9							
	10		- N-Value likely influenced by refusal material			6 - 7 - 50/4 N = 57/10"		MC=16
930	11		Auger refusal at 10.8 feet.					
	12							
	13							
	14							

C:\USERS\BLAINE.CARTER\ONEDRIVE - TTL USA\DESKTOP\3466.200 GINT.GPJ 3/21/24 Report:GEOTECH LOG

Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-202

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/10/2024*
Logged by:	*Chase Howell*	Boring Depth:	*7.9 feet*
Equipment:	*CME 550X*	Boring Elevation:	*939.9 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338660.200 E: 508884.800*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings. The pavement penetration was patched with cold mix asphalt patch.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA 1st 6" 2nd 6" 3rd 6" N-VALUE	RQD % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			ASPHALT (3 inches)					
			CRUSHED AGGREGATE (6 inches)					
	1		**FILL:** SILTY SAND, fine to medium grained, brown, moist (SM)			11 - 12 - 8 N = 20		MC=11
	2							
	3					12 - 12 - 11 N = 23		MC=12
			RESIDUUM: SANDY LEAN CLAY, stiff, brown, moist (CL)					
	4					4 - 7 - 6 N = 13		MC=16
935	5							
	6					20 - 5 - 6 N = 11		MC=20
	7							
			- N-Value likely influenced by refusal material			2 - 50/5 N = 50/5"		
	8		Auger refusal at 7.9 feet.					
	9							
930	10							
	11							
	12							
	13							
	14							
925								

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-203

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/10/2024*
Logged by:	*Chase Howell*	Boring Depth:	*8 feet*
Equipment:	*CME 550X*	Boring Elevation:	*941.4 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338575.500 E: 508902.900*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	▽ Water Level at Time of Drilling:	*7.5 ft BGS*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

▼ Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SAMPLE DATA: SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			TOPSOIL (4 inches)					
	1		**FILL:** SILTY SAND, fine to medium grained, brown, moist (SM)			6 - 5 - 9 N = 14		MC=11
940	2							MC=13
	3					8 - 8 - 5 N = 13		
	4		**RESIDUUM:** CLAYEY SAND, loose, fine to medium grained, dark gray, moist (SC)			5 - 3 - 4 N = 7		MC=16
	5							MC=16
	6		SANDY FAT CLAY, firm, grayish-brown, wet (CH)			3 - 2 - 3 N = 5		
935	7		- N-Value likely influenced by refusal material	▽		50/5 N = 50/5"		MC=22
	8		Auger refusal at 8 feet.					
	9							
	10							
930	11							
	12							
	13							
	14							

SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-204

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*6.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*943.3 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338588.300 E: 509202.400*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA 1st 6" 2nd 6" 3rd 6" N-VALUE	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			TOPSOIL (5 INCHES)					
	1		**RESIDUUM:** SANDY LEAN CLAY, firm, brown, trace gravel, moist (CL)			2 - 2 - 3 N = 5		MC=16
	2					2 - 2 - 4 N = 6		MC=18
	3		LEAN CLAY with SAND, stiff, yellow, moist (CL)					
940	4					6 - 7 - 7 N = 14		MC=20
	5		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, moist (SM)			8 - 21 - 50/3 N = 71/9"		MC=16
	6		Auger refusal at 6.5 feet.					
	7							
935	8							
	9							
	10							
	11							
	12							
930	13							
	14							

SAMPLE DATA

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-205

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/8/2024*
Logged by:	*Chase Howell*	Boring Depth:	*5.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*942.9 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338665.900 E: 509260.200*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings. The pavement penetration was patched with cold mix asphalt patch.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			ASPHALT (3 inches)					
			CRUSHED AGGREGATE (5 inches)					
	1		**FILL:** SANDY LEAN CLAY, fine to medium grained, light brown, moist (CL)			5 - 8 - 8 N = 16		MC=13
	2		**RESIDUUM:** CLAYEY SAND, medium dense to very dense, fine to medium grained, yellowish-brown, moist (SC)			4 - 5 - 6 N = 11		MC=15
940	3							
	4					8 - 12 - 12 N = 24		MC=15
	5					8 - 50/3 N = 50/3"		MC=15
			Auger refusal at 5.5 feet.					
	6							
	7							
935	8							
	9							
	10							
	11							
	12							
930	13							
	14							

SAMPLE DATA

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-206

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/8/2024*
Logged by:	*Chase Howell*	Boring Depth:	*7.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*943.7 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338756.000 E: 509251.100*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings. The pavement penetration was patched with cold mix asphalt patch.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA 1st 6" 2nd 6" 3rd 6" N-VALUE	RQD % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
	0		ASPHALT (3 inches)					
			CRUSHED AGGREGATE (6 inches)					
	1		**FILL:** SANDY LEAN CLAY, red and brown, moist (CL)			4 - 8 - 8 N = 16		MC=11
	2							
	3					8 - 7 - 7 N = 14		MC=16
940	4		**RESIDUUM:** CLAYEY SAND, loose to medium dense, fine to medium grained, brown, moist (SC)			4 - 5 - 5 N = 10		MC=12
	5							
	6					4 - 5 - 18 N = 23		MC=11
	7		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, moist (SM)			50/3 N = 50/3"		
			Auger refusal at 7.5 feet.					
935	8							
	9							
	10							
	11							
	12							
	13							
930	14							

SAMPLE DATA

SPT N-VALUE (BPF)
MOISTURE CONTENT (%)
PLASTIC AND LIQUID LIMIT (%)
10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-207

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*6.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*941.1 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338789.900 E: 509351.200*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	SAMPLE DATA: % PASSING #200 SIEVE	TYPE	SPT/CORE DATA: 1st 6" / 2nd 6" / 3rd 6" / N-VALUE	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			TOPSOIL (6 inches)					
940	1		**RESIDUUM:** SANDY SILTY CLAY, soft, brown, wet (CL-ML)	57.6		1 - 1 - 1 N = 2		MC=19 PL=1LL=18
	2		SILTY SAND, medium dense and loose, fine grained, red, moist (SM)			4 - 6 - 8 N = 14		MC=13
	3							
	4					3 - 4 - 6 N = 10		MC=13
	5					5 - 10 - 18 N = 28		MC=11
935	6		Auger refusal at 6.5 feet.					
	7							
	8							
	9							
	10							
930	11							
	12							
	13							
	14							

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-208

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*6.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*940.9 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338902.500 E: 509314.800*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA 1st 6" 2nd 6" 3rd 6" N-VALUE	RQD / % REC	SAMPLE DATA: SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
940	0		TOPSOIL (5 inches)					
			FILL: SANDY LEAN CLAY, brown, wet to moist (CL)			1 - 1 - 2 N = 3		MC=18
	2					2 - 2 - 4 N = 6		MC=16
	3		**RESIDUUM:** CLAYEY SAND, loose to medium dense, fine to medium grained, yellow, moist (SC)			2 - 3 - 5 N = 8		MC=16
	5					5 - 6 - 10 N = 16		MC=14
935	6		Auger refusal at 6.5 feet.					
	7							
	8							
	9							
	10							
930	11							
	12							
	13							
	14							

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-209

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*5.4 feet*
Equipment:	*CME 550X*	Boring Elevation:	*942.9 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338547.300 E: 509290.100*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
	0		TOPSOIL (6 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, brown, wet (CL)			2 - 1 - 1 N = 2		MC=20
	2		CLAYEY SAND, very loose to loose, fine to medium grained, red and brown, moist (SC)			2 - 2 - 2 N = 4		MC=19
940	3							
	4					2 - 4 - 4 N = 8		MC=17
	5		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, moist (SM)			8 - 50/5 N = 50/5"		MC=12
			Auger refusal at 5.4 feet.					
	6							
	7							
935	8							
	9							
	10							
	11							
	12							
930	13							
	14							

SAMPLE DATA

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-210

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*8 feet*
Equipment:	*CME 550X*	Boring Elevation:	*939.8 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338800.000 E: 509393.400*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SAMPLE DATA: SPT N-VALUE (BPF), MOISTURE CONTENT (%), PLASTIC AND LIQUID LIMIT (%)
	0		TOPSOIL (6 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, brown, wet (CL)			1 - 1 - 1 N = 2		MC=18
	2		CLAYEY SAND, loose to medium dense, fine to medium grained, reddish-brown, moist (SC)			3 - 3 - 4 N = 7		MC=14
	3							
	4					4 - 4 - 4 N = 8		MC=13
935	5							MC=13
	6					6 - 9 - 8 N = 17		
	7		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, dry (SM)			50/2 N = 50/2"		MC=5
	8		Auger refusal at 8 feet.					
930	9							
	10							
	11							
	12							
	13							
	14							
925								

SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-211

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*6 feet*
Equipment:	*CME 550X*	Boring Elevation:	*938 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338653.900 E: 509424.200*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
	0		TOPSOIL (6 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, yellowish-brown, wet (CL)			2 - 1 - 1 N = 2		MC=20
	2		CLAYEY SAND, loose to medium dense, fine to medium grained, reddish-brown, moist (SC)			2 - 3 - 6 N = 9		MC=15
935	3							
	4					5 - 6 - 6 N = 12		MC=16
	5							MC=19
	6		Boring terminated at 6 feet.			6 - 8 - 9 N = 17		
930	8							
	10							
925	13							

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-212

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*5.8 feet*
Equipment:	*CME 550X*	Boring Elevation:	*936.5 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338492.200 E: 509490.600*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	SAMPLE DATA: % PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			TOPSOIL (5 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, red, moist (CL)			2 - 1 - 2 N = 3		MC=14
935	2		CLAYEY SAND, loose to medium dense, fine to medium grained, brown, moist (SC)			2 - 4 - 6 N = 10		MC=13
	3							
	4		WEATHERED SANDSTONE (logged as SILTY SAND), medium dense to very dense, fine to medium grained, yellow, moist (SM)			5 - 5 - 6 N = 11		MC=13
	5					15 - 39 - 50/4 N = 89/10"		MC=17
	6		Auger refusal at 5.8 feet.					
930	7							
	8							
	9							
	10							
	11							
925	12							
	13							
	14							

SPT/CORE DATA: 1st 6" / 2nd 6" / 3rd 6" / N-VALUE; RQD / % REC

SPT N-VALUE (BPF)
MOISTURE CONTENT (%)
PLASTIC AND LIQUID LIMIT (%)

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-213

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*8 feet*
Equipment:	*CME 550X*	Boring Elevation:	*936.2 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338571.400 E: 509465.300*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA 1st 6" 2nd 6" 3rd 6" N-VALUE	RQD % REC	SAMPLE DATA: SPT N-VALUE (BPF), MOISTURE CONTENT (%), PLASTIC AND LIQUID LIMIT (%)
			TOPSOIL (5 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, brown and red, moist (CL)			2 - 1 - 2 N = 3		MC=16
935	2			51.9		2 - 2 - 2 N = 4		MC=18 PL=14 LL=23
	3							
	4		CLAYEY SAND, loose, fine to medium grained, brown, moist (SC)			2 - 2 - 3 N = 5		MC=16
	5		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, moist to dry (SM)			4 - 41 - 50/1 N = 91/7"		MC=15
930	6							
	7					50/4 N = 50/4"		MC=6
	8		Auger refusal at 8 feet.					
	9							
	10							
925	11							
	12							
	13							
	14							

SPT N-VALUE (BPF)
MOISTURE CONTENT (%)
PLASTIC AND LIQUID LIMIT (%)
10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-214

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*9 feet*
Equipment:	*CME 550X*	Boring Elevation:	*934.6 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338725.900 E: 509538.300*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
	0		TOPSOIL (6 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, brown, moist (CL)			1 - 1 - 2 N = 3		MC=17
	2		CLAYEY SAND, loose to medium dense, fine to medium grained, red, moist (SC)			3 - 2 - 3 N = 5		MC=17
	3							
	4					2 - 2 - 4 N = 6		MC=17
930	5					4 - 5 - 7 N = 12		MC=20
	6							
	7		SILTY SAND, dense, fine to medium grained, yellow, moist (SM)			12 - 12 - 23 N = 35		MC=14
	8							
	9		Auger refusal at 9 feet.					
925	10							
	11							
	12							
	13							
	14							
920								

SAMPLE DATA

SPT N-VALUE (BPF)
MOISTURE CONTENT (%)
PLASTIC AND LIQUID LIMIT (%)

10 20 30 40 50

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Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-215

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*6.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*932.8 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338524.600 E: 509570.500*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	SAMPLE DATA: % PASSING #200 SIEVE	TYPE	SPT/CORE DATA: 1st 6" / 2nd 6" / 3rd 6" / N-VALUE	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
			TOPSOIL (6 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, red and brown, moist (CL)			1 - 2 - 2 N = 4		MC=17
	2					2 - 2 - 2 N = 4		MC=18
930	3							
	4		CLAYEY SAND, loose, fine to medium grained, red, moist (SC)			2 - 3 - 6 N = 9		MC=17
	5		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, moist (SM)			6 - 50/5 N = 50/5"		MC=15
	6		Auger refusal at 6.5 feet.					
	7							
925	8							
	9							
	10							
	11							
	12							
920	13							
	14							

10 20 30 40 50

C:\USERS\BLAINE.CARTER\ONEDRIVE - TTL USA\DESKTOP\3466.200 GINT.GPJ 3/21/24 Report:GEOTECH LOG

Marshall County Schools
Douglas Campus - High School and New Gymnasium

Douglas, Marshall County, Alabama

Log of B-216

Drilling Co.:	*TTL, Inc.*	**TTL** Project No.:	*000230503466.00*
Driller:	*Ronald Bell*	Date Drilled:	*1/9/2024*
Logged by:	*Chase Howell*	Boring Depth:	*8.5 feet*
Equipment:	*CME 550X*	Boring Elevation:	*929.7 feet*
Hammer Type:	*Automatic*	Coordinates:	*N: 1338677.700 E: 509640.600*
Drilling Method:	*Hollow Stem Auger w/SPT Sampling*	Water Level at Time of Drilling:	*Not Encount.*
		Cave-In at Time of Drilling:	*N/A*

Remarks:
Upon completion, the boring was checked for groundwater and was then backfilled with soil auger cuttings.

The boring location was surveyed by a TTL survey crew in AL East (0101) State Plane Coordinates.

Delayed Water Level: *N/A*

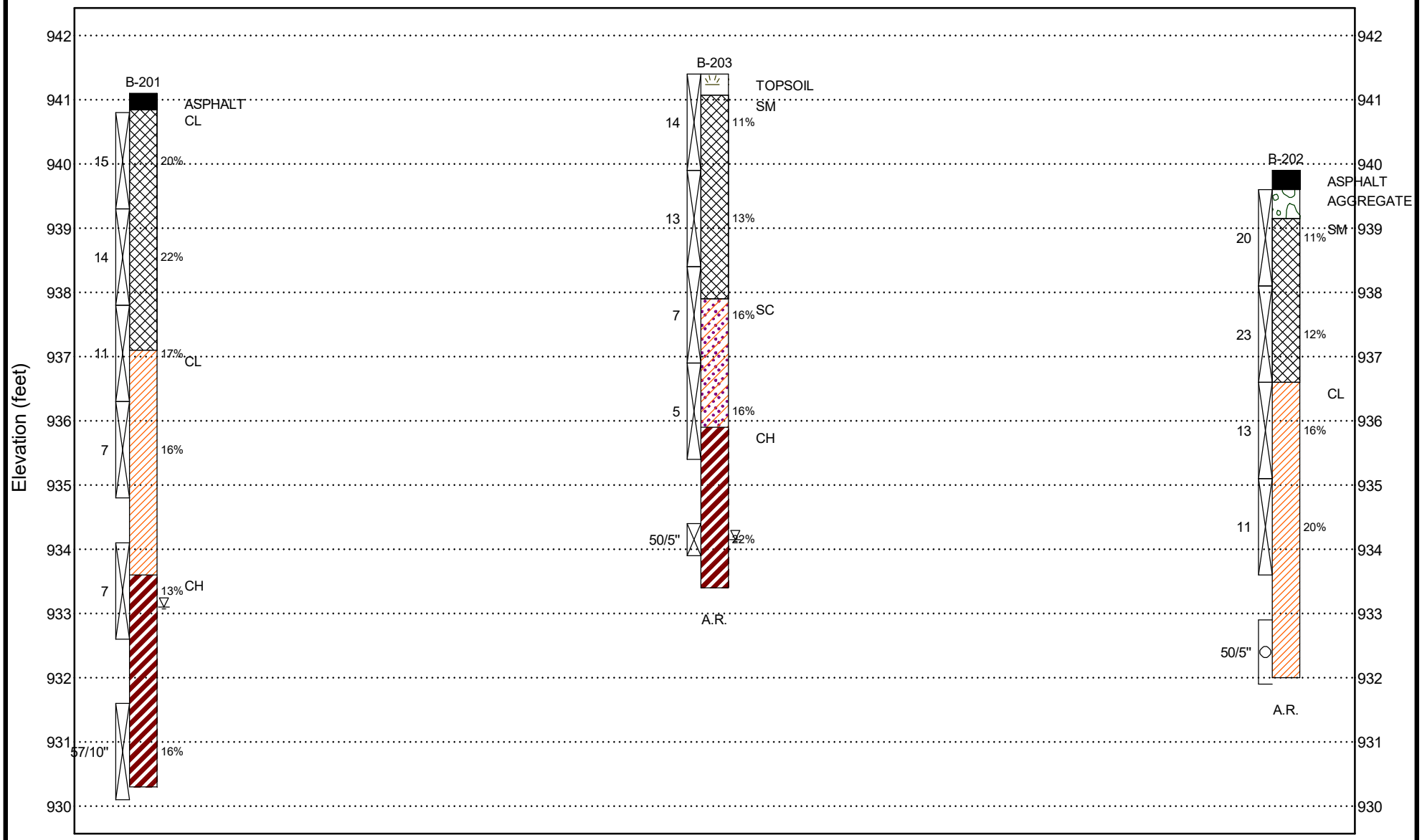
Delayed Water Observation Date: *N/A*

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIALS DESCRIPTION	% PASSING #200 SIEVE	TYPE	SPT/CORE DATA (1st 6" / 2nd 6" / 3rd 6" / N-VALUE)	RQD / % REC	SPT N-VALUE (BPF) / MOISTURE CONTENT (%) / PLASTIC AND LIQUID LIMIT (%)
	0		TOPSOIL (7 inches)					
	1		**RESIDUUM:** SANDY LEAN CLAY, soft, brown, moist (CL)			2 - 1 - 1 N = 2		MC=18
	2		SANDY LEAN CLAY, soft, red, moist (CL)			1 - 2 - 2 N = 4		MC=21
	3							
	4			50.2		1 - 1 - 1 N = 2		MC=20 PL=14 LL=24
925	5		CLAYEY SAND, loose, fine to medium grained, red, moist (SC)			3 - 3 - 4 N = 7		MC=19
	6							
	7							
	8		WEATHERED SANDSTONE (logged as SILTY SAND), very dense, fine to medium grained, yellow, moist (SM)			5 - 50/5 N = 50/5"		MC=15
920	9		Auger refusal at 8.5 feet.					
	10							
	11							
	12							
	13							
	14							
915								

SAMPLE DATA

10 20 30 40 50

C:\USERS\BLAINE.CARTER\ONEDRIVE - TTL USA\DESKTOP\3466.200 GINT.GPJ 3/21/24 Report:GEOTECH LOG



TTL

SUBSURFACE CROSS-SECTION A-A'

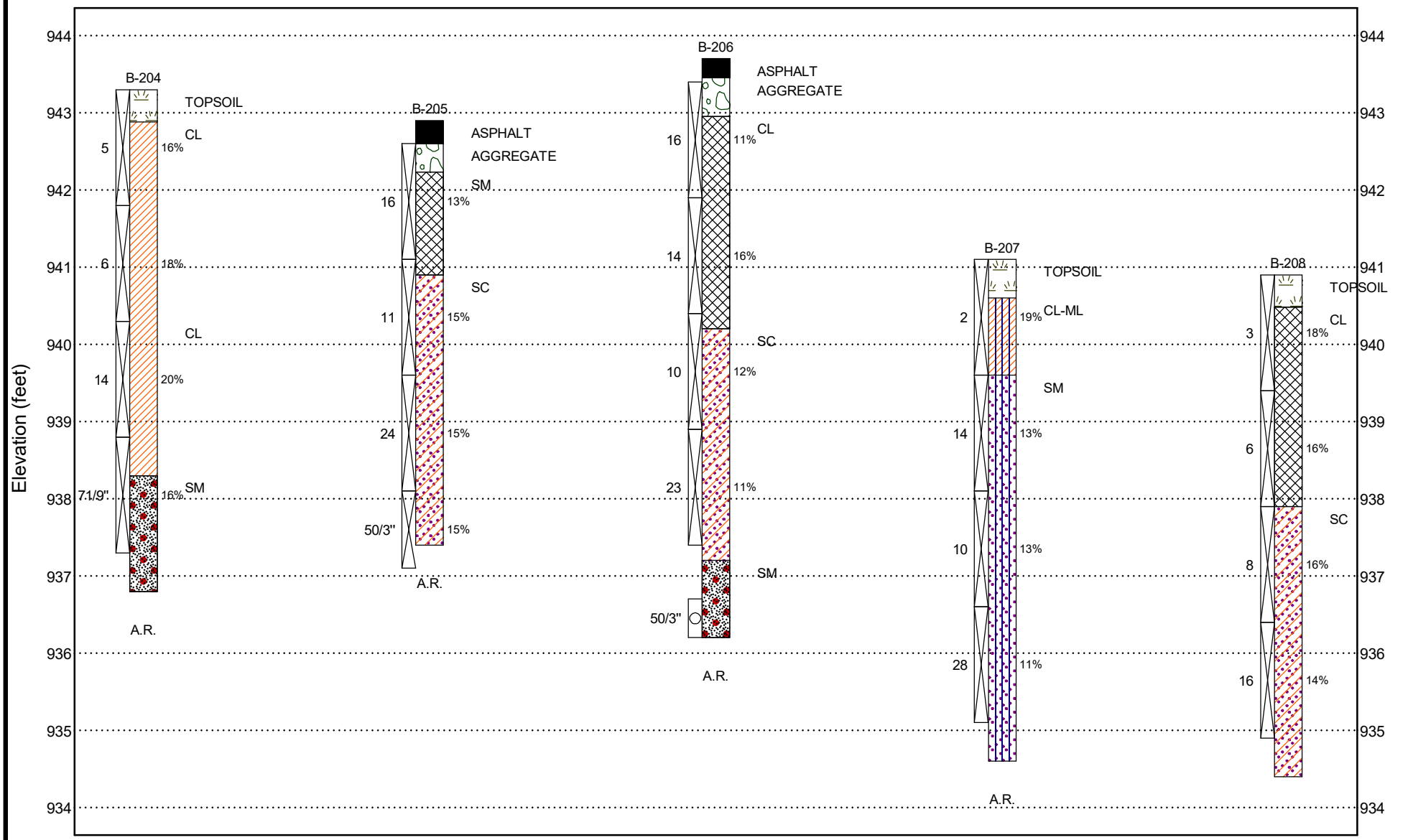
Client: Marshall County Schools
Project: Douglas Campus - High School and New Gymnasium
Location: Douglas, Marshall County, Alabama
Project Number: 000230503466.00

LEGEND: See Legend Key Sheet for explanation of symbols

N (bpf) | % Moisture Classification
Recovery% Core Size RQD% | Material Symbol

B.T. = Boring Terminated A.R. = Auger Refusal

- Water level at time of boring
- Delayed water level
- Cave-in depth
- Perched water level.



TTL

SUBSURFACE CROSS-SECTION B-B'

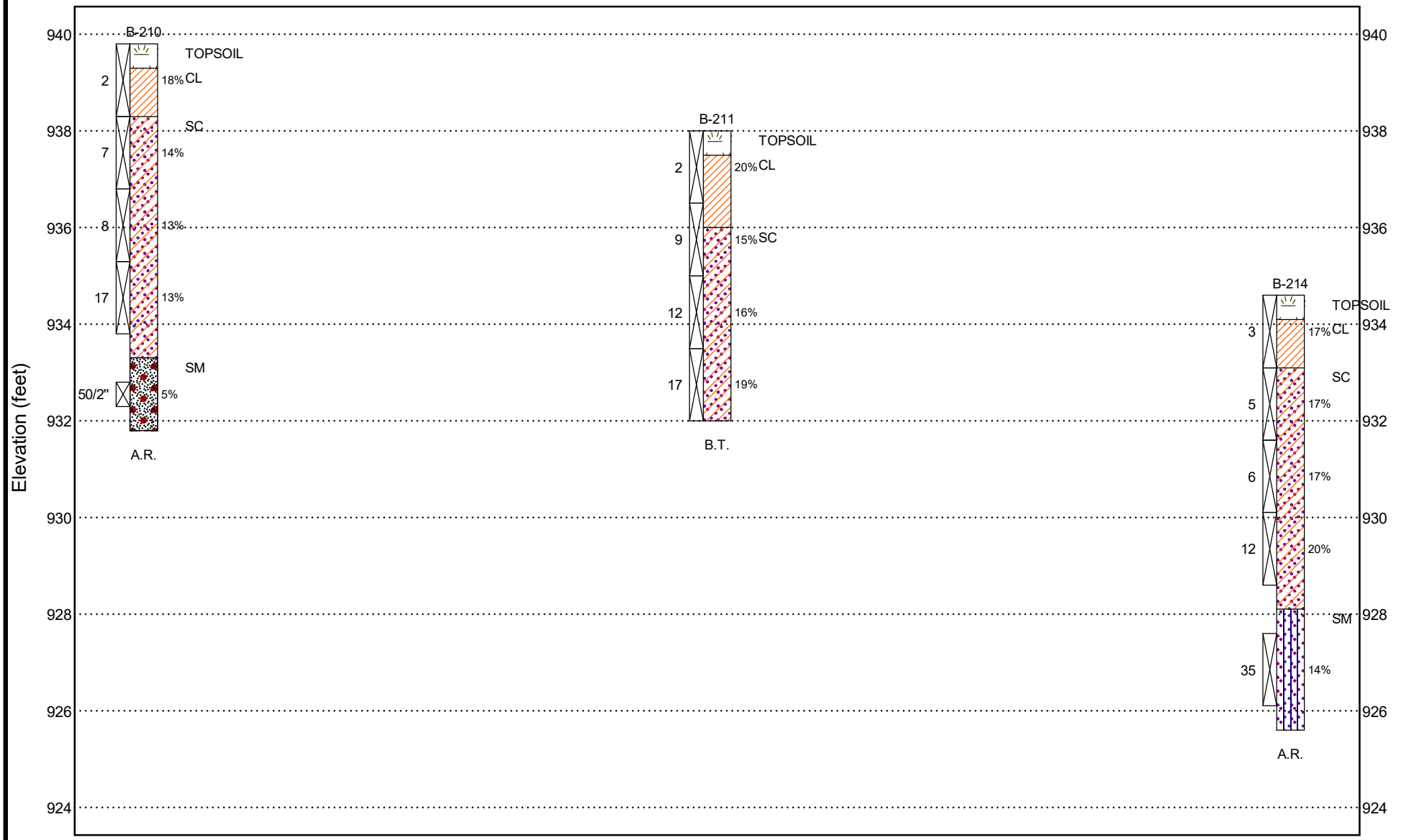
Client: Marshall County Schools
Project: Douglas Campus - High School and New Gymnasium
Location: Douglas, Marshall County, Alabama
Project Number: 000230503466.00

LEGEND: See Legend Key Sheet for explanation of symbols

N (bpf) | % Moisture Classification | Material Symbol | Recovery% Core Size RQD%

B.T. = Boring Terminated A.R. = Auger Refusal

- Water level at time of boring
- Delayed water level
- Cave-in depth
- Perched water level.



TTL

SUBSURFACE CROSS-SECTION C-C'

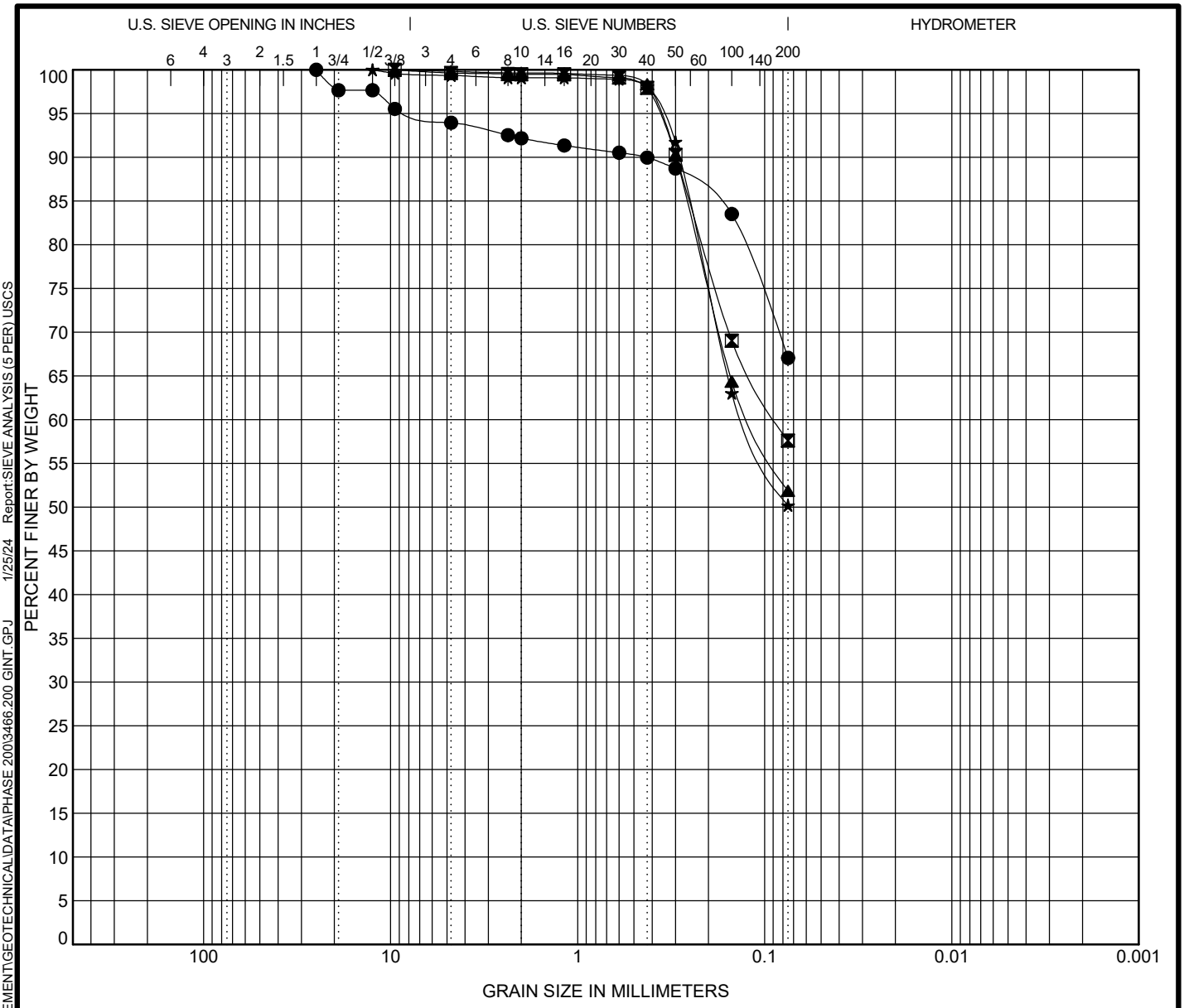
Client: Marshall County Schools
Project: Douglas Campus - High School and New Gymnasium
Location: Douglas, Marshall County, Alabama
Project Number: 000230503466.00

LEGEND: See Legend Key Sheet for explanation of symbols

N (bpf) | % Moisture | Classification | Material Symbol | Recovery% | Core Size | RQD%

B.T. = Boring Terminated A.R. = Auger Refusal

- Water level at time of boring
- Delayed water level
- Cave-in depth
- Perched water level.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

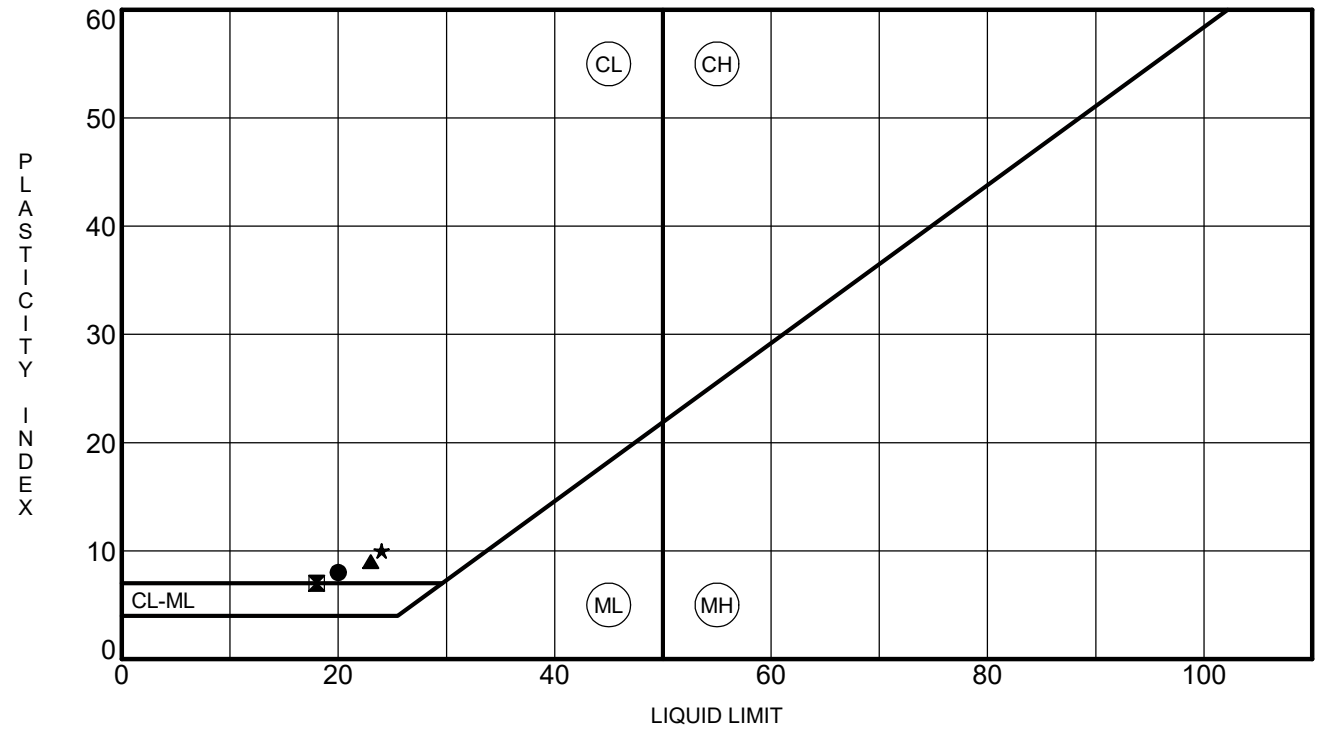
	Sample ID	USCS Classification	LL	PL	PI	Cc	Cu
●	**B-201 / 4.8 - 6.3 feet**	**SANDY LEAN CLAY (CL)**	**20**	**12**	**8**		
⊠	**B-207 / 0 - 1.5 feet**	**SANDY SILTY CLAY (CL-ML)**	**18**	**11**	**7**		
▲	**B-213 / 1.5 - 3 feet**	**SANDY LEAN CLAY (CL)**	**23**	**14**	**9**		
★	**B-216 / 3 - 4.5 feet**	**SANDY LEAN CLAY (CL)**	**24**	**14**	**10**		

	Sample ID	D100	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-201 / 4.8 - 6.3 feet**	**25**				**6.1**	**26.8**	**67.1**	
⊠	**B-207 / 0 - 1.5 feet**	**9.5**				**0.4**	**42.0**	**57.6**	
▲	**B-213 / 1.5 - 3 feet**	**9.5**				**0.2**	**47.9**	**51.9**	
★	**B-216 / 3 - 4.5 feet**	**12.5**				**0.6**	**49.2**	**50.2**	

TTL

SIEVE ANALYSIS RESULTS

Client: Marshall County Schools
Project: Douglas Campus - High School and New Gymnasium
Location: Douglas, Marshall County, Alabama
Project Number: 000230503466.00



Sample ID	WC	LL	PL	PI	Fines	USCS Classification
● B-201 / 4.8 - 6.3 feet	16	20	12	8	67	SANDY LEAN CLAY (CL)
⊠ B-207 / 0 - 1.5 feet	19	18	11	7	58	SANDY SILTY CLAY (CL-ML)
▲ B-213 / 1.5 - 3 feet	18	23	14	9	52	SANDY LEAN CLAY (CL)
★ B-216 / 3 - 4.5 feet	20	24	14	10	50	SANDY LEAN CLAY (CL)

TTL

ATTERBERG LIMITS RESULTS

Client: Marshall County Schools
Project: Douglas Campus - High School and New Gymnasium
Location: Douglas, Marshall County, Alabama
Project Number: 000230503466.00

APPENDIX B

Exploration Procedures

Laboratory Testing Procedures

EXPLORATION PROCEDURES

Field Locating of Borings

The exploratory borings were field located by TTL personnel by using a handheld global positioning system (GPS) device and/or pacing measured distance from nearby landmarks. The boring locations were offset from the planned locations as needed based on existing utilities and obstructions. The boring locations were then surveyed by a TTL survey crew. The Boring Location Plan appended to the report depicts the approximate locations of the borings.

Soil Borings

A TTL geoprofessional was present during drilling to document conditions and classify the recovered samples in general accordance with the Unified Soil Classification System (USCS), which is defined by ASTM D2487 and D2488. The geoprofessional maintained handwritten records (called boring logs) of the drilling, sampling, groundwater, and backfilling data.

The soil borings were drilled by an ATV-mounted CME 550x drilling rig using hollow-stem auger drilling methods. Soil samples were obtained at selected depths in general accordance with the Standard Penetration Test (SPT) as described in ASTM D1586. For this test, a split-barrel sampler is driven into the soil through three increments of 6 inches each with blows from a 140-pound hammer falling 30 inches. The number of hammer blows required to advance the split-barrel sampler through each increment is recorded, and the sum of the final two 6-inch intervals is called the “N-value,” with units of blows per foot (bpf). Where it was not possible to advance the sampler through a full 6-inch increment with 50 hammer blows, driving of the sampler was terminated and the sampler penetration was measured. N-values for this condition are reported as “50/x”, where x is the sampler penetration in inches. The N-values recorded during the sampling process provide an index to the strength and consistency of the soil.

Auger refusal occurs when a very dense/hard material is encountered that cannot be penetrated with typical auger drilling methods. For this exploration, the borings were terminated when reaching refusal. Core drilling into refusal materials was not included in the scope of our services.

Groundwater Measurements

The boreholes were checked for groundwater upon the completion of drilling and select boreholes were checked for the presence of groundwater at the end of the day of drilling. Delayed water readings were not attempted for these borings due to the borings being drilled and backfilled in the same day for safety purposes.

Backfilling Boreholes

Each borehole was backfilled to the ground surface with auger cuttings and pavement penetrations were patched with cold mix asphalt patch. Backfill sometimes consolidates after backfilling causing

the top of the backfill column to settle and leaving an open hole at the ground surface. Return trips to the site to top-off backfill that has settled were not part of our scope of services.

LABORATORY TESTING PROCEDURES

Classification and Index Testing

The recovered soil samples were classified in the field and reviewed in the laboratory by a geoprofessional using the USCS as a guide. Selected samples were tested for the following properties in general accordance with the applicable ASTM standards:

- Water content (ASTM D 2216),
- Atterberg limits (ASTM D 4318), and
- Sieve analysis (ASTM D 6913).

Results of tests for water content, Atterberg limits, and percent passing No. 200 sieve are presented on the boring logs and full results of sieve analyses and Atterberg limits are presented on the Sieve Analysis Results and Atterberg Limits Results sheets in Appendix A.

Supplemental General Conditions of the Contract

Article 1: Definitions

Item N Owner: After last sentence, Add Scout Program Management and its personnel are authorized representatives of the Owner.

Article 6: B. (1) Supervision, Superintendent, & Employees
Add the following after B (1) (b)

(c) The Contractor shall continuously supervise, direct, and coordinate the Work, using its best skill, effort, knowledge, and attention during performance of the work. The contractor shall employ and maintain at the Project only competent supervisory personnel. Contractor's superintendent(s), whose qualifications are acceptable to the Awarding Authority, shall be at the site during construction activity and shall be authorized to act for Contractor in its absence. If, for reasonable reason, the Owner refuses to approve the individual, or withdraws its approval once after giving it, the Contractor shall name a different superintendent for the Owner's review and approval. Any disapproved superintendent will not perform in that capacity thereafter at the Project site.

(d) The Awarding Authority reserves the right to credit the contract for any unreasonable or uncustomary absence of the Superintendent(s) from the site. The Contractor shall not remove from the work a superintendent satisfactory to the Contractor and the Awarding Authority unless his employment is terminated. At the Awarding Authority's discretion, work may be suspended, with no extension to the contract time, until such time that a qualified replacement acceptable to the Awarding Authority is provided. The contractor shall be responsible to the Awarding Authority for any acts or omissions of the Contractor, its employees, and others engaged in the Work on behalf of the Contractor.

(e) The Contractor shall provide a sufficient and appropriate level of superintendence to prosecute the work with diligence and to ensure adequate oversight, management, and supervision given the complexity, phasing, size, and/or affected area of the project.

(f) Owner/Architect/Contractor (OAC) meetings shall be held bi-weekly ON SITE until the project is determined "closed out" by the Awarding Authority. Project Superintendent (Contractor) shall attend meetings until all punch list items are complete. Project Manager (Contractor) shall attend meetings until Awarding Authority has deemed project closed in accordance with 01700 Project Closeout.

(g) In general, important verbal communications will be confirmed in writing to the Contractor, and these and other communications should always be available upon written request of the Contractor.

Article 12: Progress Schedule

Replace paragraph A with the following.

The Contractor shall, within ten days after date of commencement and as directed in the earlier of either the Notice to Proceed, Letter of Intent, or other instrument, prepare and submit for the Designer and Awarding Authority's review and approval a Critical Path Method (CPM) type of schedule in both electronic (not PDF, see below) and hard format showing the order in which the Contractor proposes to carry out the Work within the contract time. The CPM schedule shall include, among other detail, the date Contractor will start the salient features of the Work, including, but not limited to, procurement of material, plant and equipment, startup, testing and acceptance, critical milestones, activity relationships and constraints, float, and the contemplated date of completion for the Work and each activity there under. The schedule shall be of sufficient detail to reflect all major aspects and constraints of the Work including, but not limited to, coordination with other trade packages and any information or action required by the Designer and/or the Awarding Authority. The Designer and Awarding Authority's review and approval of the Contractor's construction schedule shall be only for compliance with the specified format, Contract Time, and suitability for monitoring progress of the Work and shall not be construed as a representation that the Designer or Awarding Authority has analyzed the schedule to form opinions of sequences or durations of time represented in the schedule.

The CPM schedule shall be in the form of a computerized flow chart. The contractor shall provide licensed copies of software used to develop the schedule at no additional cost to the Awarding Authority. The Contractor shall regularly update the CPM schedule. At the end of each month, Contractor shall enter the actual percentage of completion and the actual start and finish dates on the construction schedule and deliver to the Awarding Authority two current copies showing planned and actual progress of the Work with each Application for Partial Payment. The construction schedule shall be revised to reflect any agreed extensions of the Contract Time or as required by conditions of the Work.

The Contractor's construction schedule shall be used by the Contractor, Designer, and Awarding Authority to determine the adequacy of the Contractor's progress. The Contractor shall be responsible for maintaining progress in accordance with the currently approved construction schedule and shall increase the number of shifts and/or overtime operations, days of work, and/or amount of construction plant as may be necessary to do so. If the Contractor's progress falls materially behind the currently approved construction schedule and, in the opinion of the Designer or Awarding Authority, the Contractor is not taking sufficient steps to regain schedule, upon written request Contractor shall submit for review by Designer and Awarding Authority such supplementary or revised construction schedules as necessary to demonstrate the manner in which the original rate of progress will be regained, all without additional cost to the Awarding Authority.

Failure by the Contractor to comply with these progress requirements to ensure completion within the Contract Time will be sufficient reason for the Awarding Authority to terminate the Contract or

supplement the Contractor as provided elsewhere in the contract. Float or slack time within the construction schedule is not for the exclusive use or benefit of the Awarding Authority or of the Contractor but is a resource available to both parties as needed to meet contract milestones and the contract completion date.

Pursuant to these float sharing requirements, no time extensions will be granted until a delay occurs which will impact the Work's critical path, consumes all float or contingency time available, and extends the Work beyond the contract completion date.

Whenever necessary, due to receipt of a high volume of simultaneous submittals, the Designer shall notify the Contractor that submittal review must be prioritized and request the Contractor to provide said prioritization, in writing, of those simultaneous submittals based on the contractor's approved project schedule. This shall stay the twenty-one (21)-day review requirement for the lower priority submittals.

No extension of contract time will be granted for Owner delays concurrent with delays by the Contractor.

Article 25: Owner's Right to Correct Work

Add the following paragraph (B)

The Awarding Authority reserves the right to require the Contractor to provide, at Contractor's expense, a warranty bond for items not complied with the Contract Documents that may impair or reduce the expected service life of the building or related components or systems.

Article 54: Building and Environmental Control

Add the article in its entirety

The Contractor shall provide, at its expense, all necessary equipment, utilities, fuel, safeguards, and other requirements to maintain temperature and humidity control within the specifications and material manufacturer's stated tolerances as necessary to protect all work and materials against damage and installation failures until final acceptance of all Work in the Contract, unless the building or buildings are fully occupied by the Awarding Authority prior to such acceptance, in which case the Awarding Authority will assume all expense of maintaining building environmental control from the date of occupancy. The Contractor shall provide building environmental control including, but not limited to, the following:

A. At all times during the placing, setting, and curing period of concrete, sufficient temperature control to ensure the heating of spaces to not less than 50 F and not to exceed 90 F. For the placing of interior wood finish work and throughout the placing of wood finish and other interior finishing, varnishing, painting, etc., appropriate building environmental control shall be in place for a period of ten days previous and until final acceptance of the Work.

B. Provide temporary closures for windows, doors, and all temporary openings and take every reasonable precaution to prevent the escape of warm air from or entrance of cold air into the building to maintain appropriate building environmental control for the work taking place and commensurate with the final operating conditions.
C. Provides such other protection as required under the specific material specifications in the manufacturer's recommendation.

SECTION 011000 – SUMMARY [ADD 2]

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Work covered by Contract Documents.
   2. Access to site.
   3. Work restrictions.
   4. Specification and drawing conventions.
   5. Miscellaneous provisions.

B. Related Requirements:
   1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Douglas High School Competition Gym/Multi-Purpose Gym
   1. Project Location: 151 Eagle Point Drive, Horton, Alabama

B. Owner: Marshall County Board of Education
   1. Owner's Representative: Mark Howard; Cell phone (256) 960-0049; Email: howardm@marshallk12.org

C. Architect: Ward Scott Architecture, Inc. Huntsville, Alabama.
   1. Architect's Representative: Chad Terwilliger; Cell phone (260) 349-3406; Email: chad@wardscottmorris.com

D. Owner Representative: Scout Program Management
   1. Scout Representative: Dennis McDaniel; Cell phone (205) 420-8163; Email: dmcdaniel@scoutpm.com

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:
   1. Construction of a new high school gymnasium and associated support spaces. Consists of a new PEMB structure with exterior walls of CMU w/ brick veneer and metal panel upper sections. Includes full-court wood athletic flooring, retractable bleachers and associated gym equipment and systems. Sitework includes screen walls, drainage and new paved parking. Alternate 1 includes the construction of a new PEMB Multi-Purpose structure connecting to the existing competition gymnasium and band building.

B. Type of Contract:
   1. Project will be constructed as one prime contract.

1.4 ACCESS TO SITE

A. General: Contractor shall have full use of Project site within the designated construction limits for construction operations during construction period. Access to existing facilities will be prohibited.

1.5 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.
   1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
   1. Notify Architect not less than two days in advance of proposed utility interruptions.
   2. Obtain Architect's written permission before proceeding with utility interruptions.

C. Controlled Substances:
   1. Use of tobacco products on Project site is not permitted.
   2. Use of other controlled substances on Project site is not permitted.

1.6 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

1.7 ORDER OF PRECEDENCE:

A. Change Orders
B. Addenda
C. Supplemental general conditions and special conditions (if included)
D. Contract
E. Specifications
F. Large Scale Drawings
G. Enlarged Plans
H. Plans
I. Instructions to Bidders
J. Advertisement for bids
K. Proposal (Bid)

1.8 LIQUIDATED DAMAGES:

A. Liquidated Damages: The agreement will include a stipulation that Liquidated Damages will be established in the following amount of dollars per calendar day for each calendar day after the completion date that the work is not fully completed and a Certificate of Substantial Completion executed.
1. $500.00 per calendar day.

1.9 CONSTRUCTION SCHEDULE:

A. The Agreement will include a stipulation that the work shall be completed, the Contractor's equipment removed from the Site and all work required by Section 01770 Closeout Procedures be completed according to the following schedule:
1. Pre-Bid Conference: **September 1, 2026 at 10:00 AM**.
a. Location: Marshall County Board of Education, 12380 US-431, Guntersville, AL 35976
2. Receipt of Bids: **September 22, 2026 at 2:00 PM [ADD 1]**
a. Location: Marshall County Board of Education, 12380 US-431, Guntersville, AL 35976
3. Contract Award / LOI to Begin Submittals & Sales Tax Exemption: TBD
4. DCM Pre- Construction Conference / Begin work on site: TBD
5. Construction Duration: 520 Calendar Days **[ADD 2]**
6. Substantial Completion: TBD (Tentative)

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 – ALLOWANCES [ADD 2]

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Lump-sum allowances.
2. Unit-cost allowances.
3. Quantity allowances.
4. Contingency allowances.
5. Testing and inspecting allowances.

C. Related Requirements:

1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
2. Section 014000 "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 UNIT-COST ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.9 QUANTITY ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.

B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.10 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.11 TESTING AND INSPECTING ALLOWANCES

A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.

B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.

C. Costs of testing and inspection services not specifically required by the Contract Documents are Contractor responsibilities and are not included in the allowance.

D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.12 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.

2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES, VOLUME 1 COMPETITION GYM

A. Allowance No. 1: Removal and Replacement of Unsuitable/Unconsolidated Materials (Unit Price #1)
   1. Quantity Allowance: Include in base bid, 3,500 cu. Yd. of unsatisfactory soil excavation and disposal off-site and replacement with satisfactory soil material from off-site. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices.

B. Allowance No. 2 Excavation and Replacement of Rock (Unit Price #2**)**
   1. Quantity Allowance: Include in base bid, 2,750 cu. Yd. of rock excavation and disposal off-site and replacement with satisfactory soil material from off-site. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices.

C. Allowance No. 3: Concrete Foundations. (Unit Price #3)
   1. Quantity Allowance: Include in base bid, 70 cu. yd. of concrete for spread footings in place to support PEMB frames/bents foundations. Contractor to provide an in-place unit price for reinforcing steel and concrete spread footings based on these quantities. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."

D. Allowance No. 4: Reinforcing Steel. (Unit Price #4)
   1. Quantity Allowance: Include in base bid, 2 tons of reinforcing steel in place in addition to the steel shown in structural drawings. This steel is to be placed in sizes and locations at the direction of the Architect or Engineer at no additional cost to the Owner. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."

E. Unit Price Allowance No. 5: Structural Steel. (Unit Price #5)
   1. Include a unit price allowance of .5 tons structural steel in place in addition to the steel shown on the contract documents. This steel is to be placed in sizes and locations at the direction of the Owner, Architect, or Engineer.

F. Allowance No. 6: Landscaping.
   1. Contingency Allowance: Include $15,000 for use as instructed by the Owner and Architect for landscaping.

G. Allowance No. 7: Permit & Utility Fees:
   1. Contingency Allowance: Include $4,000 for use as instructed by the Owner and Architect for permit and utility fees.

H. Allowance No. 8: Project Contingency.
   1. Contingency Allowance: Include $300,000 for use as instructed by the Owner and Architect.

I. Allowance No. 9: Fire Fighter Communication System.
   1. Contingency Allowance: Include $75,000 for signal survey, procurement and installation of NFPA-compliant signal booster and bi-directional antenna system.
      a. Scope to be verified by survey requirements and Section 284111.

J. Allowance No. 10: AV Allowance
   1. Contingency Allowance: Include $500,000 for the gym sound system (wireless mics and Bluetooth), play clocks, LED Digital Screen Scoreboards, LED digital scorer's table and all associated components and install.

K. Allowance No. 11: – Exterior Building Signage
   1. Lump Sum Allowance: Include $30,000 for use as instructed by the Owner and Architect, for procurement and installation of Exterior Architectural Signage as selected by the Owner.

L. Unit Price Allowance No. 12: Brick Allowance:
   1. Include a unit price allowance of $700 per thousand for all face brick indicated on drawings.

M. Allowance No. 13: Interior Graphics
   1. Lump Sum Allowance: Include an allowance of $50,000.00 for the purchase and installation of graphics as instructed by the Owner, Architect, or Construction Manager.

3.4 SCHEDULE OF ALLOWANCES, VOLUME 2 (ALTERNATE) MULTI-PURPOSE GYM

A. Allowance No. A-1: Lump Sum Contingency
   1. Include a contingency allowance of $250,000.00 for use as instructed by the Owner or Architect.
B. Allowance No. A-2: Removal and Replacement of Unsuitable/Unconsolidated Materials (Unit Price #1)
   1. Quantity Allowance: Include in base bid, 3,000 cu. Yd. of unsatisfactory soil excavation and disposal off-site and replacement with satisfactory soil material from off-site. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 “Unit Prices.”
C. Allowance No. A-3: Excavation and Replacement of Rock (Unit Price #2)
   1. Quantity Allowance: Include in base bid, 1,750 cu. Yd. of rock excavation and disposal off-site and replacement with satisfactory soil material from off-site. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 “Unit Prices.”
D. Allowance No. A-4: Concrete Foundations. (Unit Price #3)**[ADD 2]**
   1. Quantity Allowance: Include in base bid, 40 cu. yd. of concrete for spread footings in place to support PEMB frames/bents foundations. Contractor to provide an in-place unit price for reinforcing steel and concrete spread footings based on these quantities. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."
E. Allowance No. A-5: Reinforcing Steel. (Unit Price #4)**[ADD 2]**
   1. Quantity Allowance: Include in base bid, 2.0 tons of reinforcing steel in place in addition to the steel shown in structural drawings. This steel is to be placed in sizes and locations at the direction of the Architect or Engineer at no additional cost to the Owner. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."
F. Unit Price Allowance No. A-6: Structural Steel. (Unit Price #5)**[ADD 2]**
   1. Include a unit price allowance of .5 tons structural steel in place in addition to the steel shown on the contract documents. This steel is to be placed in sizes and locations at the direction of the Owner, Architect, or Engineer.
G. Allowance No. A-7: AV Allowance
   1. Contingency Allowance: Include $250,000 for the gym sound system (wireless mics and Bluetooth), play clocks, LED Digital Numbers Scoreboards, LED digital scorer’s table and all associated components and install.
H. Allowance No. A-8: Fire Fighter Communication System.
   1. Contingency Allowance: Include $50,000 for signal survey, procurement and installation of NFPA-compliant signal booster and bi-directional antenna system.
      a. Scope to be verified by survey requirements and Section 284111.
I. Unit Price Allowance No. A-9: Brick Allowance:**[ADD 2]**
   1. Include a unit price allowance of $700 per thousand for all face brick indicated on drawings.

END OF SECTION 012100

SECTION 012300 – ALTERNATES [ADD 2]

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
   1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
   2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
   1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether indicated as part of alternate.
B. Execute accepted alternates under the same conditions as other work of the Contract.
C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Competition Gym Additional Parking [ADD 2]
   1. Base Bid: Include the entirety of the scope described in Volume 1 of the Drawings not described an alternate.
   2. Alternate: Include price for additional parking, grading, etc as detailed on sheets:
      a. 1-C202
      b. 1-C204
      c. 1-C302
      d. 1-C401
      e. 1-C501
      f. 1-C601
      g. 1-C701

B. Alternate No. 2: Multi-Purpose Gym
   1. Base Bid: Include the entirety of the scope described in Volume 1 of the Drawings not described as an alternate.
   2. Alternate: Include price for the entirety of the scope described in Volume 2 of the Drawings.

END OF SECTION 012300

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION [ADD 2]

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Requests for Information (RFIs).
3. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

C. Related Requirements:

1. Section 011200 "Multiple Contract Summary" for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
2. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
3. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
4. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.
5. Section 019113 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

1.3 DEFINITIONS

A. RFI: Request from Owner, Construction Manager, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. [**Use CSI Form 1.5A.**] Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect and Construction Manager.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.

10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Form bound in Project Manual.

    1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's and Construction Manager's Action: Architect and Construction Manager will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect or Construction Manager after 1:00 p.m. will be considered as received the following working day.

    1. The following Contractor-generated RFIs will be returned without action:

        a. Requests for approval of submittals.
        b. Requests for approval of substitutions.
        c. Requests for approval of Contractor's means and methods.
        d. Requests for coordination information already indicated in the Contract Documents.
        e. Requests for adjustments in the Contract Time or the Contract Sum.
        f. Requests for interpretation of Architect's actions on submittals.
        g. Incomplete RFIs or inaccurately prepared RFIs.

    2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
    3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

        a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Construction Manager in writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

    1. Project name.
    2. Name and address of Contractor.
    3. Name and address of Architect and Construction Manager.
    4. RFI number including RFIs that were returned without action or withdrawn.
    5. RFI description.
    6. Date the RFI was submitted.
    7. Date Architect's and Construction Manager's response was received.

F. On receipt of Architect's and Construction Manager's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect and Construction Manager within 7 days if Contractor disagrees with response.

    1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
    2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.7 PROJECT MEETINGS

A. General: General Contractor**[ADD 2]** will schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner, Construction Manager, and Architect, within three days of the meeting.

B. Preconstruction Conference: General Contractor**[ADD 2]** will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Lines of communications.
    f. Procedures for processing field decisions and Change Orders.
    g. Procedures for RFIs.
    h. Procedures for testing and inspecting.
    i. Procedures for processing Applications for Payment.
    j. Distribution of the Contract Documents.
    k. Submittal procedures.
    l. Preparation of record documents.
    m. Use of the premises [**and existing building**].
    n. Work restrictions.
    o. Working hours.
    p. Owner's occupancy requirements.
    q. Responsibility for temporary facilities and controls.
    r. Procedures for moisture and mold control.
    s. Procedures for disruptions and shutdowns.
    t. Construction waste management and recycling.
    u. Parking availability.
    v. Office, work, and storage areas.
    w. Equipment deliveries and priorities.
    x. First aid.
    y. Security.
    z. Progress cleaning.

4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, Construction Manager of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    a. Warranty requirements.
    b. Acceptability of substrates.
    c. Temporary facilities and controls.
    d. Space and access limitations.
    e. Regulations of authorities having jurisdiction.
    f. Testing and inspecting requirements.
    g. Installation procedures.
    h. Coordination with other work.
    i. Required performance results.
    j. Protection of adjacent work.
    k. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: General Contractor**[ADD 2]** will conduct progress meetings at weekly intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

        1) Review schedule for next period.

    b. Review present and future needs of each entity present, including the following:

        1) Temporary facilities and controls.
        2) Progress cleaning.
        3) Quality and work standards.
        4) Status of correction of deficient items.
        5) Field observations.
        6) Status of RFIs.
        7) Status of proposal requests.
        8) Pending changes.
        9) Status of Change Orders.
        10) Pending claims and disputes.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

    a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

E. Coordination Meetings: General Contractor**[ADD 2]** will conduct Project coordination meetings at weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
    c. Review present and future needs of each contractor present, including the following:

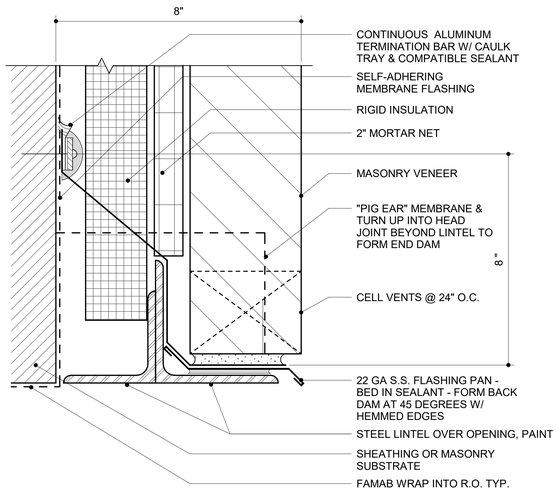
        1) Sequence of operations.
        2) Status of submittals.
        3) Off-site fabrication.
        4) Site utilization.
        5) Temporary facilities and controls.
        6) Hazards and risks.
        7) Progress cleaning.
        8) Quality and work standards.
        9) Change Orders.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

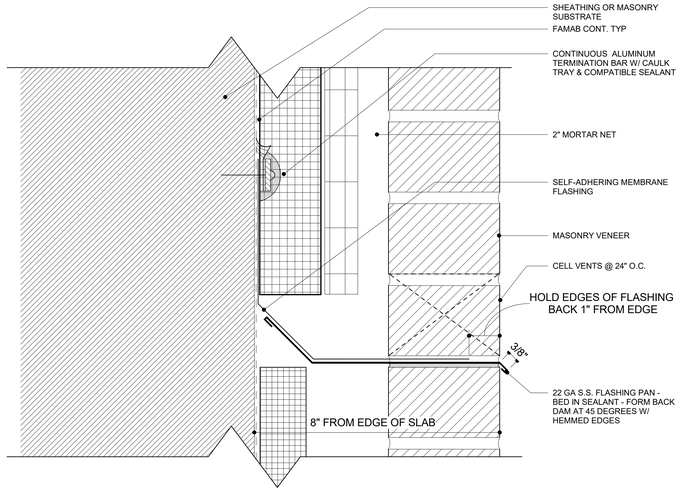
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

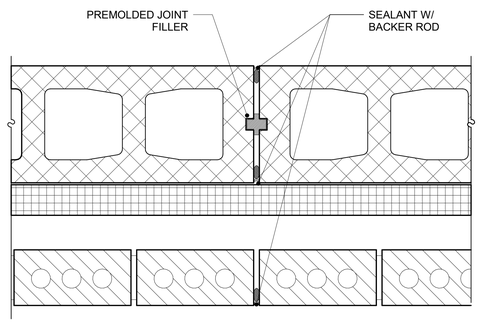
END OF SECTION 013100



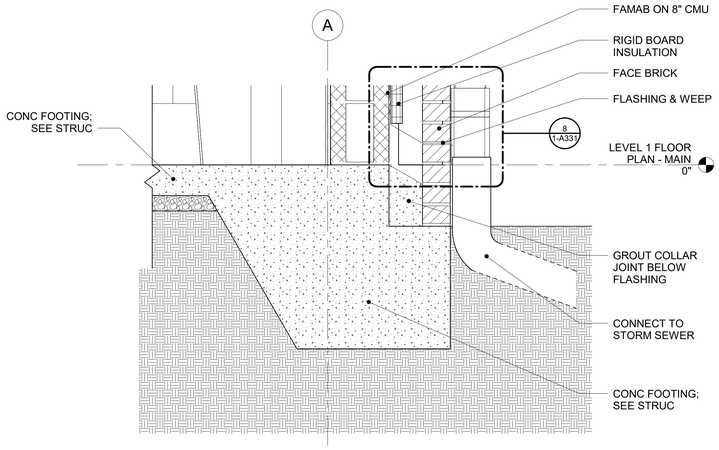
9 EMBEDDED FLASHING AT OPENING HEAD 1
6" = 1'-0"



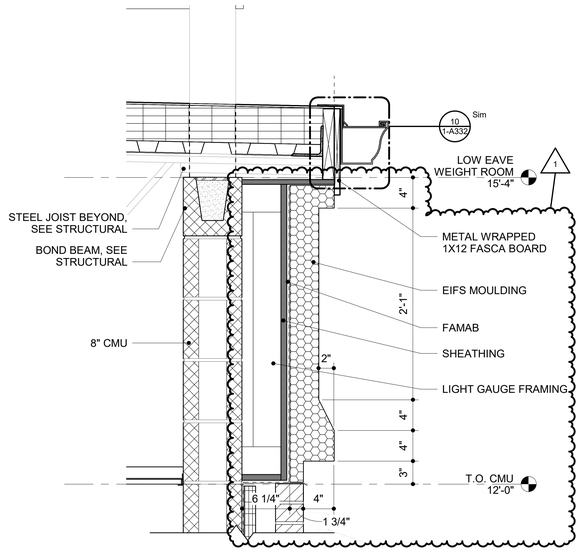
8 EMBEDDED FLASHING SYSTEM & WEEP
6" = 1'-0"



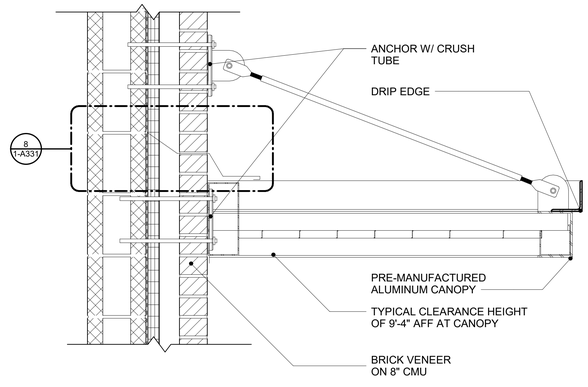
7 MASONRY CONTROL JOINT
3" = 1'-0"



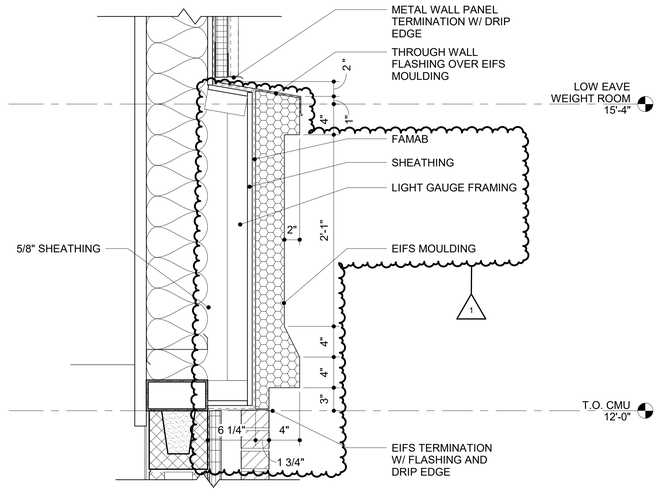
6 DETAIL - BASE OF WALL
1 1/2" = 1'-0"



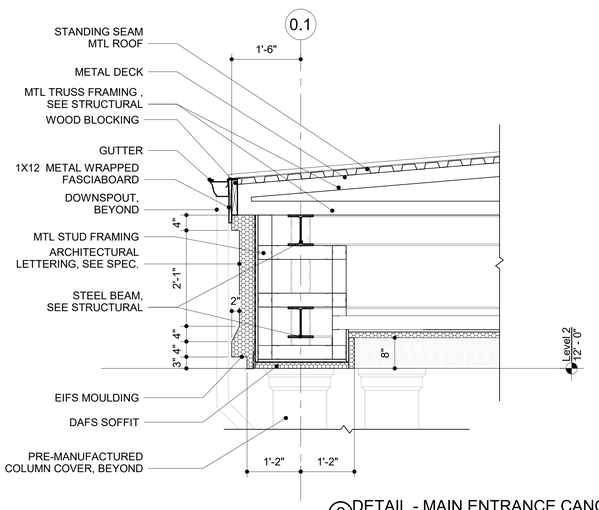
5 BUILDING SECTION 1
1 1/2" = 1'-0"



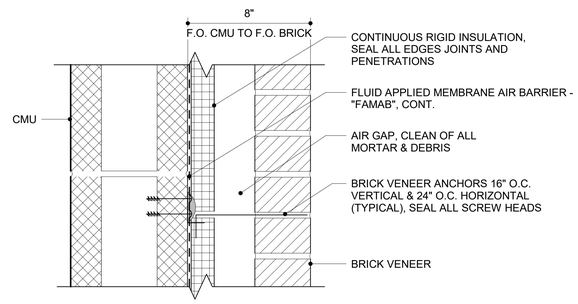
4 DETAIL-WALL HUNG CANOPY
1 1/2" = 1'-0"



3 DETAIL-TYPICAL EIFS MOUDLING AT WALL
1 1/2" = 1'-0"



2 DETAIL - MAIN ENTRANCE CANOPY
3/4" = 1'-0"



NOTE: DRAWING EXPANDED FOR CLARITY

1 TYP. BRICK VENEER ON CMU WALL ASSEMBLY
3" = 1'-0"

WARD|SCOTT|MORRIS
ARCHITECTURE
TUSCALOOSA | HUNTSVILLE
1606 PAUL W. BRYANT DRIVE TUSCALOOSA, ALABAMA 35401
www.wardscottmorris.com

DOUGLAS HIGH SCHOOL COMPETITION GYMNASIUM
MARSHALL COUNTY BOARD OF EDUCATION
225 EAGLE DR, DOUGLAS, AL 35964

STATE OF ALABAMA
WILLIAM ZACHARY TURNER
1978
REGISTERED ARCHITECT

BID DOCUMENTS

DATE: 08/19/26
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REVISIONS

#	DESC	DATE
1	ADD 02	09/04/26

SECTION DETAILS

1-A331